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ALBERTA TEACHERS' ASSOCIATION

BRIEF

TO

ALBERTA ROYAL COMMISSION

ON

EDUCATION

1958



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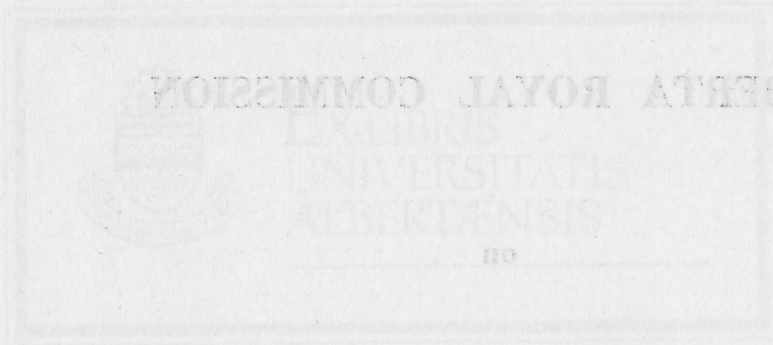
EDMONTON, ALBERTA

APRIL, 1958



BRIEF

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APRIL 1955

EDMONTON ALBERTA

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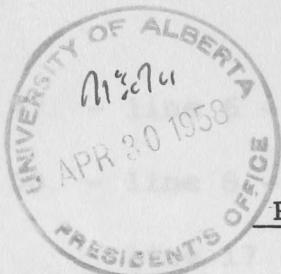
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ERRATA
TO THE ATA BRIEF TO THE
ROYAL COMMISSION ON EDUCATION

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- Page iv - Retention Procedures
1. for Inservice read In-service
- Page v - Acceleration and Retardation of Pupils
2. for is read as

Brief

- Page 13 - line 21 - for large read broad
- Page 14 - line 15 - for Russian read Russia
- line 22 - read minimum requirements are
- Page 17 - line 33 - add bracket after obsolete
- Page 18 - line 40 - for there read their
- Page 20 - line 14 - for man read may
- Page 22 - line 5 - for cooperation read co-operation
- Page 32 - lines 5 and 6 - read - During the five-year period
1950 to 1954, first teaching certificates were issued
to 3,596 teachers, an average of 719 teachers a year
- line 7 - for decare read decade
- line 7 - for ned read new
- line 34 - for 1,960 read 1960
- Page 35 - line 26 - for Educational read Education
- line 31 - for cirriculums read curriculums
- Page 43 - line 36 - for teachers read teachers'

- Page 47 - line 6 - for cooperation read co-operation
- Page 50 - line 8 - for had read receives
- Page 50 - line 17 - for are read is
- Page 51 - line 18 - for worth while read worthwhile
- Page 57 - for Chapter 8, Special Needs read Chapter 8, Special Services
- Page 57 - for Chapter 9, Organization and Administration read Chapter 9, The Organization of Schools
- Page 57 - for Chapter 10, Junior College, Technical, and Agricultural Education read Chapter 10, Junior College, Technical, and Vocational Education
- Page 60 - line 20 - for leaving read attendance
- Page 63 - line 26 - for Department af Education read Department of Education
- Page 67 - line 35 - for coordinator read co-ordinator
- Page 69 - line 12 - for Enquiries read Inquiries
- Page 74 - line 15 - for have read has
- Page 75 - line 33 - for Enclyclopedia read Encyclopedia
- Page 75 - line 46 - for Phychology read Psychology
- Page 76 - line 28 - for of read for
- Page 80 - line 10 - for cirruculum read curriculum
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- Page 86 - line 19 - for repreach read reproach
- Page 92 - line 28 - for demedial read remedial
- Page 95 - line 6 - for supporting-specialists read supporting-specialists'
- Page 103 - line 40 - for in increased read in an increased

Page 107 - line 5 - for to read for

Page 112 - line 10 - ~~for~~ 1954-57 read 1954 to 1957

Page 118 - line 7 - for 1911-1957 read 1911 and 1957

- line 34 - for busses read buses

Page 124 - line 30 - for coursees read courses

Page 129 - line 35 - for difference in work week read differences in work weeks

- line 37 - for term read terms

Page 158 - line 10 - for lilustrated read illustrated

Page 163 - line 1 - for throught read thought

- line 16 - for unguazed read unglazed

Page 167 - line 3 of footnote - for Pniversity read University

Page 176 - line 7 - for coordination read co-ordination

- line 13 - for since read because

Page 183 - line 17 - for thaa read that

Page 185 - line 5 - for nel. To read nel. to

Page 187 - line 29 - for have read has

Page 189 - line 32 - for or read of

Page 190 - line 34 - for of read or

Page 196 - line 20 - for centers read centres

Page 197 - line 16 - for enrols read enrolls

- line 28 - for centers read centres

- line 33 - for centers read centres

April, 1958

CHAPTER I

THE ALBERTA TEACHERS' ASSOCIATION

The Alberta Teachers' Association is a voluntary association of teachers in the province of Alberta. It was organized in 1918 under the provisions of the Teachers' Act of the Province of Alberta. The first meeting was held at Calgary on May 14, 1918. The association has since that time been working for the improvement of the teaching profession in Alberta.

The Alberta Teachers' Association, originally called the Alberta Teachers' Association, was organized in 1918 under the provisions of the Teachers' Act of the Province of Alberta. The first meeting was held at Calgary on May 14, 1918. The association has since that time been working for the improvement of the teaching profession in Alberta.

In 1924, the Teachers' Association was renamed the Alberta Teachers' Association. The name of the organization was changed to the Alberta Teachers' Association. The association has since that time been working for the improvement of the teaching profession in Alberta.

PART I

CHAPTER 1. THE ALBERTA TEACHERS' ASSOCIATION

Objects of the Alberta Teachers' Association

Section IV of The Teaching Profession Act states that the objectives of the Association shall be:

- (1) to advance the interests of the teaching profession in Alberta;
- (2) to raise the status of the teaching profession;
- (3) by influencing the public mind to secure recognition of the teaching profession as a learned and honorable profession;
- (4) by influencing the public mind to secure recognition of the teaching profession as a learned and honorable profession;
- (5) to secure the best interests of the teaching profession in Alberta;
- (6) to secure the best interests of the teaching profession in Alberta;
- (7) to secure the best interests of the teaching profession in Alberta;
- (8) to secure the best interests of the teaching profession in Alberta;
- (9) to secure the best interests of the teaching profession in Alberta;
- (10) to secure the best interests of the teaching profession in Alberta;

CHAPTER 1

THE ALBERTA TEACHERS' ASSOCIATION

The Alberta Teachers' Association as it exists today is largely the product of the foresight and leadership of John Walker Barnett. He visualized a teachers' association based upon security of tenure, pensions, contracts, a code of ethics, disciplinary rights, professional membership, and a faculty of education, all of which would provide a body of professional teachers for the education of the children of Alberta.

The Alberta Teachers' Association, originally called the Alberta Teachers' Alliance, was organized in 1918 under *The Societies Act* of the Province of Alberta. The first annual meeting was held during Easter Week, 1918. Resolutions were passed dealing with continuous contracts, pensions, salaries, and ethics. It was decided to publish a magazine as the official organ of the Alberta Teachers' Alliance.

In 1935, *The Teaching Profession Act* was passed by the Legislative Assembly and the name of the organization was changed to the Alberta Teachers' Association. This Act did not provide for statutory membership as had been expected, but it did give the Association the right to discipline its own members. In 1936 *The Teaching Profession Act* was amended to require that teachers in tax-supported schools under the jurisdiction of the Department should, upon employment, become members of the Alberta Teachers' Association.

Objects of the Alberta Teachers' Association

Section IV of *The Teaching Profession Act* states that the objectives of the Association shall be:

- (a) to advance and promote the cause of education in the province;
- (b) to raise the status of the teaching profession:
 - (i) by initiating and promoting research in methods of arousing interest in presentation of teaching the various subjects of the curriculum, and
 - (ii) by establishing research libraries and circulating libraries of books, treatises, and papers designed to assist the teacher in the classroom;
- (c) to promote and advance the interests of teachers and to secure conditions that will make possible the best professional service;
- (d) to arouse and increase public interest in educational affairs; and
- (e) to co-operate with other teachers' organizations in Canada and elsewhere having the same or like aims and objects.

Developments in Education in Alberta

The following improvements in education in Alberta have been supported or initiated by the Alberta Teachers' Association:

1. Security of tenure for teachers
2. A pension plan for teachers
3. Academic and political freedom for teachers
4. A Faculty of Education responsible for the education of all teachers in the province
5. Recognition of the Alberta Teachers' Association as the official representative and spokesman for all the teachers in Alberta
6. The establishment of larger units of administration in education
7. The right of teachers to bargain collectively
8. The establishment of educational research on a permanent basis
9. An extended program of teacher education
10. The increase and extension of provincial grants to education
11. Equality of educational opportunity for all students
12. Scholarships for undergraduates and graduates of the Faculty of Education
13. A program of financial assistance for undergraduates
14. Financial aid by the government of the Province of Alberta for bursaries and loans to undergraduate and graduate students.

Some of the objectives of the Association which have not been realized, either wholly or in part, are:

1. The application of tenure regulations to include administrators, probationary teachers, and transfers
2. Pensions comparable with those in business, industry, and government
3. High standards of certification
4. Achievement of professional-level salaries
5. Adequate government grants to provide for equal educational opportunity for all children
6. A greater degree of professional responsibility for the Alberta Teachers' Association as a whole and the teacher as an individual.

Organization and Administration of the Alberta Teachers' Association

The Alberta Teachers' Association is governed by the Annual General Meeting which formulates policy to be carried out by the Executive Council. The Annual General Meeting considers reports and resolutions. The councillors to this meeting are elected by local associations, with no local having fewer than two councillors.

The Executive Council implements established policy, conducts the business of the Association, and makes decisions normal to an executive body. The province is divided into ten districts each of which elects a representative to the Executive Council. The Executive Council is com-

posed of these ten district representatives, a president and a vice-president, elected from the membership at large, a past president and a general secretary-treasurer.

The executive officers act as the senior civil service of the Association, are appointed by the Executive Council and are responsible to it for carrying out the business of the Association. The staff includes the general secretary-treasurer, the assistant general secretary, and two executive assistants.

Need for the Royal Commission on Education

For a number of years the Alberta Teachers' Association has asked for a survey of education in Alberta. A resolution was passed by the Annual General Meeting of the Alberta Teachers' Association and was presented to the Executive Council of the Government of the Province of Alberta. Last year, the Alberta Teachers' Association was pleased to learn that the government was considering the appointment of a commission to investigate and report on elementary and secondary education in Alberta.

The Executive Council, with the approval of the 1957 Annual General Meeting, decided:

1. To prepare and submit the Association's policies concerning education
2. To make available to the Commission all the information the Alberta Teachers' Association has, including reports and records
3. To assist the Commission in every way possible and to ask local associations and teachers to do the same.

At its regular meeting in December, 1957, the Executive Council of the Alberta Teachers' Association appointed a committee responsible for the preparation and presentation of a submission to the Royal Commission on Education. The committee has been at work since the first of the year and the following brief and supplementary memoranda represent its findings.

Organization of the Submission

The Alberta Teachers' Association submission is in seven parts.

Part I Introduction.

Part II Submission regarding section A of the terms of reference.

Part III Submission regarding section B, subsection 6, 7, and 8 of the terms of reference.

Part IV Submission regarding section B, subsections 1,2,3,4, and 5 of the terms of reference.

Part V Research in Education.

Part VI Summary of Recommendations

Part...VII Supplementary Memoranda.

CHAPTER 1

DETERMINING THE OBJECTIVES OF EDUCATION

While recognizing the legal authority with respect to education is vested in the provincial legislatures, The Alberta Teachers' Association believes that the basis of final authority should rest with the community and informed judgment of the whole people. No one group can speak for society as a whole. The task of developing general and specific aims and objectives for education is too important to be left solely to professional educators. Such general and specific aims should grow from the wisdom of laymen and professional educators working together.

1. Present Provisions for Determining the Objectives of Education

The provisions would apply to what now embodies the will of society as brought to bear on educational aims and objectives. Others, the Teachers' Electors, are in a position to advise the government they wish to support. Such a consultation area is that of educational aims and objectives would be a welcome and valuable contribution to the political campaign. A further aspect is that the electors are composed of so many groups that it would be impossible to bring them all together to take

PART II

CHAPTER 2. DETERMINING THE OBJECTIVES OF EDUCATION

A second provision would seem to be made through the General Curriculum Committee of the Department of Education. The Curriculum News Letter, Number 4, February, 1956, contains a brief description of the General Curriculum Committee and its present membership. These functions of the General Curriculum Committee are given:

- a) To consider reports from the Minister and from the other curriculum committees.
- b) To co-ordinate the work of the other curriculum committees by maintaining an overall view of the school curriculum.
- c) To review proposed curriculum changes and submit recommendations thereon.
- d) To initiate proposals with regard to needed curriculum changes and submit them to the Minister who then acts in his discretion direct the other curriculum committees accordingly.

This seems to make the General Curriculum Committee more of a reviewing body than a body advising the Minister of Education on policy of an educational nature and objectives of education. In practice this is exactly so. It is only fair to say that Alberta is one of the few provinces which have laws based on such a General Curriculum Committee and that this is in itself valuable from a public relations point of view.

CHAPTER 2

DETERMINING THE OBJECTIVES OF EDUCATION

While recognizing that legal authority with respect to education is vested by statute in the provincial legislature, The Alberta Teachers' Association believes that the basis of final authority must rest with "the enlightened and informed judgment of the whole people." No one group can speak for society as a whole. The task of developing general and specific aims and objectives for education is too important to be left solely to professional educators. Such general and specific aims should grow from the wishes of laymen and professional educators working together.

1. Present Provisions for Determining the Objectives of Education

Two provisions would appear to exist now whereby the will of society is brought to bear on educational aims and objectives. One is the franchise. Electors are in a position to choose the government they wish to support. Such a contentious area as that of educational aims and objectives would be a tenuous and nebulous basis on which to conduct a political campaign. A further difficulty is that political platforms are composed of so many planks that it would be confusing, misleading, and even dangerous to link decision with respect of educational aims and objectives to any single political party. The matter is broader in scope than that.

A second provision would seem to be made through the General Curriculum Committee of the Department of Education. The Curriculum News Letter, Number 5, February, 1956, contains a brief description of the General Curriculum Committee and its present membership. These functions of the General Curriculum Committee are given:

- (a) To consider reports from the Minister and from the other curriculum committees
- (b) To co-ordinate the work of the other curriculum committees by maintaining an over-all view of the school curriculum
- (c) To review proposed curriculum changes and estimate public reaction toward them
- (d) To initiate proposals with respect to needed curriculum changes and convey these to the Minister, who then may, at his discretion, direct the other curriculum committees accordingly.

This seems to make the General Curriculum Committee more of a reviewing body than a body advising the Minister of Education on policy or on the aims and objectives of education. In practice this is certainly so. It is only fair to say that Alberta is one of the few provinces which involves laymen on such a General Curriculum Committee and that this is in itself valuable from a public relations point of view.

2. Proposed Method of Determining the Objectives of Education

What the Alberta Teachers' Association would like to see is a body similar in composition to the present General Curriculum Committee, but responsible for advising the Minister of Education concerning curriculum policy and the aims of education as based on the considered judgment of thinking people. The Alberta Teachers' Association submits that it would anticipate being one of the organizations represented on such an advisory body. As such it would be guided, among others, by the following principles :

1. That as far as possible every child, no matter what his geographic location, should have the right to educational opportunities consistent with his ability, needs, and interests
2. That it is the democratic right of every child to have educational opportunities sufficiently differentiated to achieve results consistent with principle 1 above
3. That the basic educational program of every child should provide for the development of skills (reading, language, mathematical); attitudes (respect for the worth of the individual, loyalty to such institutions as the family and the nation, honesty, truthfulness); appreciations (in such cultural fields as music, drama, art, and literature)
4. That every child should have his curiosity aroused by a stimulating school environment and that he should be taught to think clearly within the limits imposed by ability
5. That the development of character and citizenship is implicit in the educational aims of elementary and secondary schools
6. That, while they cannot be expected to train directly for trades and professions, elementary and secondary schools should provide opportunities for exploratory vocational experiences and guidance.

The Alberta Teachers' Association contends that, once the general goals of education have been set with advice from a body such as has been suggested, the implementation and achievement of these goals should be the responsibility of professional educators.

RECOMMENDATION

1. **The commission should study the advisability of setting up a representative body, with membership similar to that of the present general Curriculum Committee, to advise the Minister of Education concerning the aims and objectives of education.**

EDUCATION IN MODERN SOCIETY

No aspect of education can be properly understood apart from the society it serves. The objectives of education, the curriculum, the staff, the work of pupils, and all the other aspects of education within the Canadian system were developed to serve and fit a social system in a society where the young people make their living in the world of work. A study and analysis of the relationship of the educational system to the social structure of society and the modern economy will establish the basis for the subsequent chapters which deal with the various aspects of education.

TRAINED PERSONNEL FOR MODERN VOCATIONS

In addressing the National Conference on Engineering, Scientific and Technical Manpower held at St. Andrews-by-the-Sea, New Brunswick, September 11, 1954, the Hon. G. D. Howe declared:

PART III

CHAPTER 3. EDUCATION IN MODERN SOCIETY

CHAPTER 4. STAFFING ALBERTA'S SCHOOLS

CHAPTER 5. FINANCING EDUCATION

CHAPTER 3

EDUCATION IN MODERN SOCIETY

No aspect of education can be properly considered apart from the society it serves. The objectives of education, the curriculum, the attainment of pupils, and all the other aspects of education which the Commission was directed to study are set in a social system in modern communities where people make their living in the world of work. A study and analysis of the relationship of the educational system to the requirements of industry and the modern community can establish the guide lines for the subsequent detailed study of the various aspects of education.

TRAINED PERSONNEL FOR MODERN VOCATIONS

In addressing the National Conference on Engineering, Scientific and Technical Manpower at St. Andrews-by-the-Sea on September 11, 1956, the Rt. Hon. C. D. Howe declared:

I do not want to suggest that our current shortage of engineering and scientific personnel is exaggerated—but I do feel that we should look at the problem in its proper perspective.

This advice is particularly appropriate today, when the country's economic buoyancy is somewhat less than it was a few years earlier and when the intense international competition between Russia and the Free World has provoked a concern for science and education bordering on a crusade and at times hysteria. Without wishing to minimize the desirability of Canada's continuing rapid economic growth or the urgency of the international scientific race, both of which require straight thinking and large vision, two viewpoints need to be expressed.

First, the demand for personnel in all walks of life, including "trained personnel", must be given full attention if education in Alberta is to be related to the Province's and country's present and future needs. The second point of view is simply that the ultimate source of the moral authority of the profession of education resides more in the commonly shared democratic values of Canadian culture than in the shifting and sometimes conflicting demands of the economic world, important as these are. The need for the larger perspective in examining and providing for the demand for trained personnel is to some extent demonstrated in recent statements of occupational trends and tendencies. These are reviewed briefly below.

1. Demand for Trained Personnel as Predicted by Industrialists

The *Reference Brief* and *Conference Proceedings* of the National Conference on Engineering, Scientific and Technical Manpower held at St. Andrews-by-the-Sea, New Brunswick, September 9-11, 1956, considered Canada's growing need for trained manpower.

By 1980, to remain competitive with other industrial nations on the basis of projected increases in output per capita and projections of other fundamental factors, Canada will need:

- (i) to at least triple and probably quadruple her currently employed total of some 40,000 engineers;
- (ii) to triple and probably more than quadruple today's scientist force of some 20,000;
- (iii) to have ten times as many technicians assisting our scientists and engineers as are employed today. Existing capacity is capable of producing about 1/20 of this requirement. Provision for our technician requirements would absorb about 10 percent of our matriculation graduates who do not go on to or complete university training.

The Conference reported that the existing rate of university enrolment, or even a continuation of the current rate of increase in enrolment would be inadequate to meet this demand. By 1980 university enrolment would have to be increased as much as three to four times to meet the requirements indicated. To have the same proportional enrolments as the United States or Russian an enrolment increase seven to eight times that of 1956 would be necessary. It is estimated that over 20 per cent of current university graduates (1956) will be required in the teaching profession to provide instruction in elementary and secondary schools and universities, while an additional 15,000 to 20,000 university graduates must be found to become teachers of technicians. These are considered by industrialists to be the minimum requirements for economic expansion. In the words of the report these minimum requirements:

Still far short of placing us in a competitive position with other progressive nations or of exploiting the full potential of our population capable of absorbing higher education.

2. Demand for Trained Personnel as Predicted by the Canadian Department of Labour

Publications of the Economics and Research Branch of the Department of Labour, Ottawa, also predict demand for trained personnel. Valuable data are included in *Canada's Resources of Engineering and Scientific Manpower* preliminary report, September, 1956, and in *Trends in Professional Manpower Supplies and Requirements* Bulletin Number 1, August, 1957. These reports corroborate the urgent demand for engineers, scientists, and professional workers. From 1931 to 1956 the Canadian labour force increased by 39 per cent, professional workers increased by 78 per cent, and engineers by 157 per cent. In 1931 there were 48 professional workers for every 1000 workers, in 1956 the number was 62. Over the same period the number of engineers per 1000 workers increased from 3.8 to 7.1. During the 1956-1965 period it was expected that the net supply of professional workers and engineers would increase substantially from university graduations and immigration. Professional workers might be expected to increase by 50 per cent and engineers by 100 per cent in the given period. However, the Department of Labour warned that:

the unsatisfied demand of the past few years for engineers and scientists is also probably reflected in the estimates of future requirements and may have resulted in the inflation of the estimates above what could be expected solely from the year-to-year growth in the economy.

Thus, the demand for professional workers and engineers seems to be established at a high level but perhaps not at the inflated level of recent times.

3. Demand for Trained Personnel as Predicted by the Gordon Commission

The *Preliminary Report* of the Royal Commission on Canada's Economic Prospects points out that the "ability of scientists, engineers, administrators and skilled people of all kinds are being called increasingly into play." Canada is said to be facing shortages in almost every skilled occupation. These shortages are expected to get worse in the immediate future since the number of new entrants into the labour force still reflects the low birth rate of the depression years. In this report the skilled worker is defined as one with two years of training or equivalent experience. Clerical and agricultural workers are not included. Between 1931 and 1956 the proportion of skilled workers in the labour force is estimated to have increased from 10.3 per cent to 15.7 per cent. The need for such workers between 1946 and 1956 was met to a large degree by immigration, a source which will probably diminish in importance during the next decade. For this reason it is desirable for young Canadians coming into the working force to receive training in skilled occupations. A four-fold approach to the problem is suggested: (1) increasing pay differentials where shortages are likely to occur and adding incentives to encourage apprenticing to a trade; (2) expanding present and establishing new facilities for technical and vocational training both in post-high school institutions and in high schools; (3) fostering apprenticeship or in-plant training programs through government or company initiative; (4) encouraging more efficient use of skilled personnel in industry.

One of the special studies of the Gordon Commission, *Secondary Manufacturing Industry* by D. H. Fullerton and H. H. Hampson, May, 1957, states that attention concerning the supply of trained persons should be concentrated on the situation during the next five to ten years. This comment suggests that the demand for trained personnel may be met in the next and succeeding decade, say after 1965, if steps are taken by industry, government and education to provide training facilities for youth born after World War II. The period of urgency is now, and involves the training of youth born in the 1930's and early 1940's.

TRENDS IN DEMAND FOR TRAINED PERSONNEL

One of the best pictures of the present and probable future distribution of Canada's workers is found in the *Preliminary Report* of the Royal Commission on Canada's Economic Prospects, Table XI, page 23.

In considering the demand for trained personnel, particularly in scientific, engineering, technical and skilled industrial occupations, it seems well to keep in mind the following probable trends suggested in this table.

**FORECAST OF DISTRIBUTION OF TOTAL EMPLOYED CIVILIAN LABOUR FORCE
AMONG THE VARIOUS SECTORS OF THE ECONOMY**

(thousands of persons)

	1955 (Actual)		1980 (Forecast)	
	Numbers	Percent	Numbers	Percent
Agriculture	817	15.3	735	7.6
Resource Industries	297	5.6	555	5.8
Primary Manufacturing	313	5.9	486	5.0
Secondary Manufacturing	1,049	19.7	1,907	19.8
Construction	367	6.9	625	6.5
Civilian Government and Community Services	664	12.5	1,439	14.9
Transport, Storage and Communications	401	7.5	3,890	40.4
Trade, Finance, Services	1,420	26.6		
Total	5,328	100.0%	9,637	100.0%

- (1) The labour force in agriculture may be expected to decline relatively and absolutely, as it has done during the past two decades. There is a strong implication here that one of the future occupational needs in Canada is re-direction of rural youth to vocations other than agriculture..
- (2) The strictly industrial segments of the economy—resource industries, primary manufacturing and secondary manufacturing—are expected to require the same proportion of the working force in 1980 that they required in 1955. The same picture holds for construction, a part of the economy with a high proportion of skilled workers. From this forecast it appears that all efforts to provide trained personnel for these segments of the economy should be carefully planned to maintain the right proportion of workers, not to produce a surplus.
- (3) The services sector of the economy is the most rapidly growing and is expected to employ a larger proportion of the labour force in 1980 than in 1955. The 1955 proportion of the labour force in service industries was 46.6 percent; the 1980 estimated proportion is 55.3 percent. It is also noted that these industries are the most difficult to mechanize and usually show but slight gain in labour productivity because of mechanization. Further, these make the greatest demand for clerical, white-collar, and female workers. The manufacturing and construction industries noted above will probably require 1,556,000 more workers in 1980 than in 1955, the service industries will require over 2,844,000 more workers. The conclusion seems inescapable that provisions for training Canada's labour force by school systems and other agencies must take this into consideration. In view of this conclusion it is important to decide what kinds and amounts of training are needed for workers in service industries. The training needs of workers in such industries must be balanced against those in other industries, particularly manufacturing and construction.

1. Automation

According to the Canadian Labour Congress, in a special report to the Royal Commission on Canada's Economic Prospects, the much-banded term

"automation" is interchangeable with "increasing mechanization." It is important to note that "automation" as "increasing mechanization" is not wholly new, but a phenomenon linked with and growing out of the Industrial Revolution and the rise of science.

The important consideration is that automation does not mean a sudden upheaval in the Canadian economy and in the demand for workers. Other studies for the Royal Commission on Canada's Economic Prospects point out that service industries provide limited uses for automation. These studies also show that automation will be used on a limited scale in secondary industries to replace semi-skilled and unskilled, rather than skilled workers. Since secondary industries are the largest users of technically-skilled manpower, the conclusion is that in this area automation will not greatly reduce demand. The Canadian Labour Congress in its report *Probable Effects of Increasing Mechanization in Industry*, a study for the Royal Commission on Canada's Economic Prospects, September, 1956, draws attention to factors which may retard automation in Canada. These include cost, the analyzing and re-designing of processes, the shortage of engineers and technicians, human conservatism, and the smaller size of Canadian manufacturing establishments and markets compared to those in the United States. The report shows distinctly that while the significance of automation is recognized, little is known of its effect or probable effects on industry, the labour force, and human relationships. Further, although new kinds of training are allegedly needed, from top-management to the production line worker, answers are not available to questions about the specific kinds of training required nor who should undertake them: schools, governments, private institutions, unions, or manufacturers. In view of the lack of knowledge about automation and its educational requirements, it would be difficult indeed to make concrete suggestions as to the educational system required to provide the trained personnel for it.

In a noteworthy statement, The Canadian Labour Congress suggests that the task of the school is to provide basic education (which may have more permanence) rather than vocational training (which may soon be obsolete. The Congress view is that the schools should provide the mathematics and other basic subjects which will enable young people "to understand new jobs and acquire the specific new skills in training on the job."

2. Geographic Concentration of Work Opportunities

Although Western Canada has experienced marked industrial expansion in recent years, most of Canada's industry and job opportunities for technically trained personnel are concentrated in Ontario and Quebec, and to a lesser extent in British Columbia. One of the potential threats to Canada's supply of trained personnel is emigration of professional engineers, scientists, and technicians to the United States. The problem of geographic distribution of work opportunities raises certain questions. To what extent should Alberta education assume responsibility for providing trained personnel to meet the employment needs of industrial Ontario, Quebec, British Columbia or the United States? If the demand for a large proportion of the

University of Alberta's engineering students and Provincial Institute of Technology and Art students comes from outside Alberta, to what extent should Alberta elementary, secondary and post-high school educational institutions modify or adopt programs to meet this demand? Ready answers to these queries are not found in sources presently available. This is a matter for serious consideration in setting Alberta educational policy with respect to the demand for trained personnel.

3. Mobility: Horizontal, Promotional, and Social

Three kinds of mobility may well be considered in relation to the demand for trained personnel and provisions necessary to meet the demand, especially as these concern educational systems. The first is that Canada's full use of manpower demands a considerable amount of **horizontal mobility**: the movement of a worker from place to place and from employer to employer. Such mobility usually does not involve much change in the level of income, prestige, or amount of training. In this type of mobility the skilled worker is at an advantage compared to the less skilled worker, especially upon leaving marginal or declining industries to seek new work. Educational systems could facilitate horizontal mobility by standardization of teaching and curriculum for the family of the horizontally-mobile worker. Another contribution is to provide a general education oriented toward developing understandings, skills and attitudes necessary for life in Canada as a nation as well as life in a particular locality or province.

The second kind of mobility, **promotional**, refers to the series of job changes one goes through in a working career. For instance, an apprentice becomes a skilled craftsman and may eventually become a small proprietor, a foreman or even an executive. Age and experience are the two most important factors in this type of mobility. However, education is increasingly important. Promotional mobility is one of the most important needs of trained personnel today. The training of unskilled and semi-skilled workers for jobs demanding higher technical competence facilitates this mobility.

The need for supervisors, foremen, managers, and executives is reported to be acute in some Canadian enterprises. Training for such positions usually extends beyond strict technical competence into administrative procedures and human relations. It would appear that industry, government, and post-high school educational agencies must bear the brunt of recruiting and training technical personnel required for promotional mobility. Through extending to the adult population facilities for secondary education, the schools of the province may contribute in a limited way to promotional mobility. However, the major school contribution undoubtedly remains that of providing background understandings, skills, and attitudes which workers must have in order to advance in their occupations.

The third kind of mobility, **social**, refers to the upward and downward movement of people in terms of their prestige, status, and pattern of life. Its connection with the demand for trained workers though not frequently discussed or studied, cannot be ignored. It is known, for instance, that some

occupations carry more status than others, as manifest in such symbols as remuneration, working conditions, clothing, and associates. In a relatively stable society social mobility is usually up or down in relation to the social layers or classes which are widely recognized and tolerated. Occupations may be ranked by the populace as upper-class, middle-class, working-class, and lower-class. Usually occupations which require long periods of training or great talent carry enough prestige that adequate numbers of qualified people compete for them. The lowest ranking jobs are usually those which require little training or special aptitude and which in a stable society confer few status rewards on those who fill them. Most industries and most people are able to base their employment expectations and plans on tacit assumptions about the nature of the social order and what constitutes upward or downward social mobility in it.

In Canada today the social order is unstable. If a person wishes to gain status what must he do? Get a job and buy a car? Go to school and qualify for a degree or diploma? Make a reasonably high salary? These and similar questions are related to the supply of workers for scarce and socially vital occupations, and to the function of the school and its holding power. Definitions of the way to success in Canada today are not clear for young people, particularly in rural areas. Status and upward social mobility are interpreted differently by young people and by adults, including employers and educators. These last two statements require examination.

It is a well established fact that rural youth are migrating in large numbers to cities. In terms of labour supply they are the only large reservoir which may be tapped for the increasing demand for trained personnel by the industrial and service segments of the economy. What kinds of employment do rural youth take, and what are their aspirations educationally and occupationally? Does their mobility in fact constitute upward social mobility?

Recent studies in the United States show that youth from rural areas and small communities are less likely to be upwardly mobile than youth reared in larger communities. Rural youth migrating to cities gravitate toward lower status employment, metropolitan youth tend to seek higher status employment and have a greater rate of upward mobility. These studies can be found in *Rural Sociology* as follows: S. M. Lipsett "Social Mobility and Urbanization", December, 1955; R. Scudder and C. A. Anderson "Migration and Vertical Mobility", June, 1954; and F. M. Martinson "Personal Adjustment and Rural-Urban Migration", June, 1955. A study by Haller and Sewell "Farm Residence and Levels of Educational and Occupational Aspiration", *American Journal of Sociology*, January, 1957, shows that farm residence has little effect upon the educational and occupational aspirations of rural high school girls, but that rural high school boys underestimate to a marked degree the importance of education in achieving an occupational goal. A recent study by Uhler and Abell, *Rural Young People and Their Plans, Opinions and Attitudes of Selected Rural Young People Concerning Farming and Rural Life in Alberta, Ontario and Quebec*, Canadian Department of Agriculture, Farm and Rural Life Section, Ottawa,

1953, while corroborating this finding with respect to farm girls, suggests that boys are more committed to farm life than are girls. Much more evidence is needed about the impact of urban migration upon the occupational placement and social mobility of Canadian rural youth. Available evidence shows the need for assisting youth in making the transition from rural to urban society. Left to their own resources, rural youth, especially boys, find it difficult to avoid low status work and its attendant handicaps in their climb up the occupational ladder. In view of the importance of rural youth in Canada's urban-industrial development, the construction for them of educational, financial, and status bridges deserves more systematic study and action by educators, government, and economic leaders.

The second claim, that status and upward social mobility are interpreted differently by young people and adults, is related to a highly complex and important trend in Canadian society: **that the symbols of success man be achieved without superior talent or extended education, resulting in a decline in middle-class status, values, and incentives.**

What has been the experience of youth with respect to status in the last decade and a half?

- (1) Status, rank and relatively high pay were urged upon youth during World War II without the usual regard for occupational training or educational background of earlier decades.
- (2) During the post-war manpower shortage a similar demand for youth existed in which rewards of status and pay were available without a close correlation between education and training.
- (3) Visible shortages in trained personnel have been kept to a minimum by immigrant workers who are not usually symbols of status for Canadian youth.
- (4) Some vocations formerly carrying high prestige (teaching and nursing for example) have not brought the material rewards and symbols of success of certain other occupations that require less training.
- (5) Some occupations for which youth are currently urged to prepare have an unknown or ambiguous status. Nursing aides and certain technicians may occupy such positions.
- (6) The pay-differential between skilled, semi-skilled and unskilled work has not been marked. In consequence, the expenditure of time and money for vocational or other training has been questioned by youth.
- (7) The low status formerly associated with poverty, semi-skilled, or unskilled work has been reduced by security measures such as family allowances, pensions, and health and unemployment insurance benefits.
- (8) Canadian youth have been the deliberate target of market promotion. Their consumer status is high, as illustrated in *The Financial Post*, August 27, 1955, headlining the Canadian School Trustees' Association monumental report on *School Finance in Canada* with: SUB-TEEN SALES BOOM BECKONS—BUT CAREFUL PLANNING NEEDED NOW TO CASH IN.

In contrast to these experiences of Canadian youth are the values, incentives, and status of the traditional middle class which underlie much educational policy making and industrial recruitment of workers. In place of immediate satisfaction and evidence of success, we find that self-discipline, self-denial, perseverance, prolonged training without pay, and long-range personal goals and purposes are frequently expected. Such values and incentives no doubt have ultimate survival value and are essential in a highly technological democracy. In terms of individual status and immediate satisfaction, however, the experiences of Canadian youth cause them to discount these values and incentives. Regardless of the final implications of this situation for the future of Canadian Society, the immediate implications for the recruitment and training of Canadian youth for the labour force is that youth's perspective of status and upward mobility must be considered.

4. The Structure of Large Organizations

Because of changes in the Canadian economy, increasing numbers are being employed in large corporate or governmental organizations. Although the exact number of persons working for large rather than small organizations is not known, in 1951 some 73 per cent of all male workers and 92 per cent of all female workers were employees rather than being self-employed. Since membership in a large organization is considered desirable at present and will no doubt be increasingly so in the future, the nature of large organizations must be considered in the education of trained workers.

Basically the structure of the working force in large organizations is a pyramid. A small group at the apex are the policy makers. These are the boards of directors, managing directors, bureau chiefs and their assistants in the civil service, and others in "high command." Their functions are primarily setting goals for their organization, and making plans to achieve these goals. While their efforts are directed in the final analysis to the consumers of their goods and services, their immediate concerns are securing organizational efficiency and the co-operation of the bottom or third level personnel in the pyramidal structure.

A study by John Porter "The Economic Elite and the Social Structure of Canada" *The Canadian Journal of Economic and Political Science*, August, 1957, shows that policy makers in Canadian economic organizations most frequently reach the top by way of careers in engineering and science, finance, family firms, and law.

To an increasing extent recruitment for top organizational positions appears to be from the ranks of higher education rather than by promotion from lower levels in the corporate hierarchy. This underlines the need for university-trained personnel in large organizations.

Between the policy maker and the third-level workers in a large organization are the functionaries: the technical experts, office managers, lesser managers, and executives, floor superintendents, foremen and others. Their function is to help make decisions by furnishing basic technical knowledge

and skill, and to supervise the implementation of decisions made by policy makers. Although the ranks of functionaries have a broad range, from plant superintendent to foreman, they all serve as liaison persons between those above and below. Therefore, they have some responsibility for securing the cooperation of those below. Except for a very few highly responsible technical personnel who may be classed as functionaries, the great majority must be competent in human-relations skills as well as in the specialized work for which they are responsible. As already indicated under "Promotional Mobility," the need for functionaries in some Canadian enterprises is acute.

Finally, the workers who supervise no one else, who write the letters, tend the lathes, wait on customers, or keep the books, make up the large majority of employees in large organizations. These workers as a rule make few decisions. They usually perform easily-learned tasks from skilled through semi-skilled to unskilled assignments. Their usefulness in the organization and their success depend not so much on striving to get ahead as an individual as on how well they learn to work with fellow employees. Success for them also depends on their ability to absorb the psychic strains caused by routine, lack of effective communication with superiors, and lack of identification with the finished product or ultimate service of their organization.

From this brief analysis of the general structure of large organizations it appears obvious that skill in being an organizational person at the level at which one is employed may, in the long run, be as important in worker survival and satisfaction as is technical "know-how". In all provisions to train personnel for Canada's industries the organizational and human-relations aspects of work, as well as the more technical and specialized, deserve specific attention. We lack knowledge of personality characteristics required for various occupations and positions in the organizational pyramid. However, there is no question that a "marketable personality," for example, co-operation, reliability and trustworthiness, are important to all members in the occupational structure, from policy maker to the final worker. It is probable that one of the most important yet unrecognized contributions of today's school systems to economic organizations is the experience that the majority of students acquire in adjusting to a large school organization. Many of the socializing procedures used in modern education may justify their use in preparing youth for the organizational needs of industry.

It must be emphasized that use of educational institutions to prepare personnel for the technical and social requirements of today's employing organizations is a co-operative task involving education, government, industry, and labour. Educational programs must be devised using the best tools of social psychology and sociology in order to achieve the desired ends.

In addition, the structure of large organizations must be adapted and reconstructed to meet the needs of workers as human beings and at the same time the needs of an expanding economy for goods and services.

This phase of the utilization of Canada's manpower has as yet received too little attention.

The nature of Canada's occupational structure today and the manner by which its total needs must be met through education are matters requiring the utmost insight, accurate knowledge, and objectivity.

Before turning to the Alberta scene in this survey of general trends relating to the demand for trained personnel in Canada, the major findings presented thus far are summarized.

- (1) Canada unquestionably needs trained personnel now and in the future, particularly personnel trained in science, engineering, technical work and skilled occupations.
- (2) Some of the demand for scientific, engineering and technical personnel appears to be inflated in relation to Canada's ability to absorb such workers on a year-to-year basis and in relation to the needs of other sectors of the economy.
- (3) Agricultural occupations will probably require proportionately fewer workers in the next 25 years than they do at present. Resource industries, primary and secondary manufacturing, and construction will probably require about the same proportion of workers as at present during the next 25 years. The service industries will require a greater proportion of workers and will be the greatest consumers of Canada's manpower. The educational requirements of workers in service industries need as much attention as the educational requirements of workers in other industries.
- (4) Automation will augment the need for trained personnel, but will not likely effect any revolution in the man-power or training requirements of the nation. The educational requirements for automation are not specifically known.
- (5) Work opportunities are and will no doubt continue to be concentrated regionally within Canada, posing the problem of determining appropriate training for youth and workers in areas remote from these opportunities.
- (6) Considerable attention needs to be given to maintaining horizontal mobility in Canada's labour force as workers move from job to job and place to place. Some standardization of education to meet the needs of migrant workers' children, and a basic education designed to facilitate the adjustment of workers in various parts of Canada, are indicated.
- (7) Promotional mobility is needed. This involves improving both the supply of skilled workers and the supply of administrative and supervisory personnel. Extending promotional mobility primarily requires the efforts of post-high school educational institutions, government and industry. The school system contrib-

utes basically in providing the background education needed for advancement.

- (8) Because of the dynamic condition of the Canadian social order the routes to higher status or success accessible to rural youth migrating for urban employment do not appear to be clearly perceived or appreciated by them, particularly routes requiring education. Special bridges from rural environments to the higher-status occupations are needed if many rural youth, sorely needed in Canada's advance, are to avoid delay or misdirected effort in achieving their best occupational goals.
- (9) Youth accepts that the symbols of success can be achieved without superior talent or extended education. This results in a decline in middle class status, values and incentive. Educators and employers have markedly different views from those of youth on the requirements for rising in the social scale. These factors must be taken into account in planning educational programs.
- (10) Because an increasing number of workers must adjust to large scale organizations, this aspect of worker education must be recognized.

THE ROLE OF ALBERTA SCHOOLS

While all the trends just noted apply in greater or lesser degree to Alberta, it is difficult on the basis of present knowledge of the Alberta labour force to say what specific adaptation must be made in Alberta education. In a few fields, notably teaching, nursing, and some other professions, relatively adequate information is available on the Province's present and future requirements. However, no comprehensive survey of the Province's manpower requirements is available from which to estimate the number and kinds of workers needed to supply the local labour market, and the number of workers who must potentially migrate to other parts of the nation for employment. Such information, even though crude, would be an invaluable aid in relating education to the needs of industry, particularly if it were kept current. In the absence of complete data attention is directed to but one aspect of the current labour scene and to the nature of Alberta's community structure in relation to the demand and supply of labour.

1. The Current Labour Scene

In view of the large demand for trained personnel claimed as one of Canada's pressing needs, the picture in Alberta in 1957-58 provides cause for re-assessment of this claim. According to the *Annual Review of Business Conditions in Alberta, 1957*, prepared by the Alberta Bureau of Statistics, all industries, excluding agriculture, report a gain in employment with the exception of construction. However, 1957 is referred to as a "plateau", with more than the usual number of immigrants unemployed

and with a larger proportion of unplaced applicants reported by National Employment Service offices. A check with the Edmonton office in mid-March, 1958, confirmed this over-all situation and disclosed in addition that although the number of vacancies and applications for professional workers was very small in comparison to such groups as service and clerical workers, there was a surplus of both trained and untrained workers during the past year. A notable exception was nursing, for which there was a persistent scarcity. It is not intended here to draw conclusions about the current labour situation, which may be temporary. It is desired, however, to call attention to the need for specific knowledge of long-term trends in Alberta as well as in Canada with which to advise youth and young workers entering occupations. It is highly possible that a youth, a parent or even an occupational counsellor, living in communities where there is unemployment in many occupations, may take his cues for action or advice on the basis of too limited experience and knowledge. As already noted, this is a problem encountered by rural youth. Under the present conditions in Alberta this could well be a general problem of youth and their advisers in the Province. A further implication is that desirable long-term projects for training the Province's youth may not receive the support they deserve from education, industry, government and the public generally unless trends and future needs are clearly seen. Since the occupational perceptions of youth and those who must support measures to train youth are being formed by employment conditions in Alberta communities today, it is imperative that present tendencies be interpreted in relation to past trends and future probabilities. Wide dissemination of such knowledge, as soon as it can be obtained, would be an immediate and also long-term contribution to the demand for trained personnel.

2. The Structure of Alberta's Communities

Some indication of Alberta's present and probable supply of and demand for trained workers may be obtained from an analysis of Alberta's communities. For this analysis municipal governments are a convenient, though crude index of community size and characteristics. In the following table showing the 1958 pattern of municipal governments it is seen that 43.4 per cent of the Province's population reside in Alberta's nine cities. Thirty-eight per cent live in Edmonton and Calgary alone, the major occupational centres in terms of variety and quantity of workers required. The remaining municipal units represent communities with small populations and relatively simple occupational structures. A comparison of 1951 and 1956 census data shows that cities and towns are growing at a rapid rate, but that in general villages and rural communities are virtually stationary or declining in population. The rural section of Alberta, which has a slightly higher birth-rate than the cities, is clearly exporting a large proportion of its population, particularly of youth and young adults.

While this appears to be the general picture in Alberta, a more detailed knowledge of the Province's community structure and occupational pat-

terns is needed. Studies of school drop-outs in Alberta for the 1952-53 academic year conducted at the Faculty of Education disclose some areas of the province where drop-outs are significantly more numerous than for the province as a whole. These findings suggest the need for specific studies of the local communities of the province to determine local worker requirements, and the proportion of youth who must be prepared for emigration from the community. Similar research is needed to determine as closely as possible the employee requirements of our larger urban centres. Local, district or regional, and province-wide adaptations in the educational system could be made on the basis of such knowledge. This would facilitate the best training and placement for Alberta youth entering the working force. While this knowledge is not altogether lacking in some parts of Alberta or for the Province generally, it is for the most part incomplete and not sufficiently exact for policy making.

AREA AND PEOPLE UNDER VARIOUS FORMS OF MUNICIPAL GOVERNMENT IN ALBERTA, 1958

Form of Government	No. of Units ¹	Area Governed in Acres ²	% of Alberta ³	Population Governed ⁴	% of all Albertans ⁵	Density of Population
Improvement Districts	50	117,247,156	71.7	88,197	7.6	1,330 acres per person
Municipal Districts	38	29,223,384	17.9	264,092	22.8	110 acres per person
Counties	10	9,993,795	6.1	65,927	5.7	152 acres per person
Special Areas	2	5,166,080	3.2	8,723	0.8	594 acres per person
<hr/>						
Total for rural forms of municipal government	100	161,630,415	98.9	426,939	36.9	
Villages	146	30,169	0.02	45,366	3.9	1.5 persons per acre
Towns	84	67,473	0.04	152,513	13.1	2.3 persons per acre
Cities (With Lloydminster)	9 (10)	87,343	0.05	504,417 ⁷	43.4 ⁸	5.8 persons per acre
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Total for urban municipal governments	239	184,985	0.11	702,296	60.4	
<hr/>						
Indian Reservations and Military Preserves		1,576,000	0.95	17,055 13,710	1.5 1.2	
		163,382,400	100.00 ⁹	1,160,000	100.0	

Notes:

¹At January 1, 1958. Department of Municipal Affairs data (hereafter DMA).

²DMA data for all areas except Improvement Districts. This area calculated by subtracting from Alberta's area, (163,382,400 acres as computed from *Canada Yearbook* which lists the total area as 255,285 sq. mi.) the sum of all areas of other forms of municipal government, and of land reserved for the Indians and military establishments.

³Percentages calculated to slide-rule accuracy only.

⁴Rural forms of municipal government population, Dominion Census 1946, urban forms the same or modified by 1957 returns to DMA., Indian population from Indian Affairs Branch, data available at Alberta Bureau of Statistics. The remainder, 13,710, is the difference between known populations and estimated population by D.B.S. for Alberta for June, 1957.

⁵Slide-rule accuracy.

⁶Slide-rule accuracy. Note change in ratio used between rural and urban densities.

⁷Alberta proportion of Lloydminster population included.

⁸Edmonton and Calgary account for 430,930 Albertans, 37.8 per cent of the provincial population.

⁹Approximation.

3. Roles for Alberta Schools

Because many measures which schools may take for training Canada's manpower depend on both better knowledge than that now available and on the application of that knowledge at the local community level, only the more general roles of the school are here considered. A number of these functions are modifications from Lawrence Thomas in his recently published analysis of the American scene entitled *The Occupational Structure and Education*. These suggested functions of the school are important in indicating the directions which may be followed in setting up specific programs.

1. Elimination of economic barriers to extended schooling.

2. **Overcoming cultural inequalities in student backgrounds.** These inequalities originate in rural backgrounds, membership in a racial or ethnic group but partially assimilated into Canadian life, unfavorable home environment and other cultural factors. There is a genuine need for schools to develop skills in adapting programs to pupils of diverse backgrounds. Further, they and their programs must operate in such a way that students from many walks of life are convinced that the school has much to offer. The possibilities of deliberate and concerted effort in this direction by Alberta schools have not yet been fully explored.

3. **Diversifying the school program.** While some attention is being given to this aspect of education in Alberta schools, there is still much to be done in order to develop more than a narrow range of verbal and in-

tellectual abilities. Talents in the arts, mechanics, co-operative human relations, group leadership, creative expression, sports, political activities and other areas may be significantly cultivated through formal schooling extended into late adolescence. However, the need to diversify the school program in no way reflects diminished concern or emphasis with respect to basic training in language, mathematics or science.

4. Promoting a critical understanding of the occupational structure. This role may be performed through helping students understand the occupational structure as it actually is by providing them with a grasp of standards by which it may be judged and reformed along democratic lines. The school may discharge this role partly through a well-designed curriculum, particularly in the social studies. This demands that school counsellors be as well informed about Alberta's and Canada's social and economic structure and trends as they are about individual psychology and the intricacies of the school system. An urgent need in Alberta today is to provide students with a critical understanding of occupations so that they may make better occupational decisions.

5. Developing status for a wider range of vocations. This role does not belong to the school alone, but the school has an important responsibility in helping to increase job satisfaction and in indicating the values of an occupation to an individual. Since most youth cannot find employment in professional and managerial occupations, even under the best conditions of free training and equal opportunity, it is important to extend to other kinds of occupations the values which make these high-status categories popular. For instance, if a great many students by-pass technician training in efforts to be engineers, perhaps this is because they do not see the values in being a technician which they see in being an engineer. If many of the satisfactions ordinarily associated with engineering could be associated with being a technician, the value of being a technician, as far as the individual is concerned, may be enhanced to the point where it appears, and is, a desirable vocation. This process may be termed "professionalizing" necessary occupations.

In the industrialized society in Canada and Alberta the need for increasing the values of critical occupations is very important in motivating youth to undergo the necessary training. Educators, in conjunction with industrialists, could explore the possibilities of providing for increased responsibility, independence from close supervision, freedom for self-expression, variety of work on the job, and dignified personal relations in every occupation for which secondary and post-high schools prepare workers. This move has economic as well as psychological implications. Where it has been tried productivity and worker morale have improved, absenteeism and labour turn-over have been reduced. Increasing occupational values is one of the important frontiers now facing both education and industry.

6. Providing individual and vocational guidance. The usual concern of educators has been to develop guidance services within the school. Much has already been said in educational literature on this subject. However,

in the interest of youth and the nation's economy, not only school but community guidance agencies are urgently needed in all places where youth is seeking work. While the National Employment Service offers placement facilities for regions within the province, there is still room for an extension of guidance and placement services for out-of-school youth and working adults. In some of Alberta's smaller communities the school counsellor may be the only person available who can provide professional-quality counselling and occupational information. Consideration could be given to utilizing his services in the community as well as in the school. Such contact with the community might well prove highly beneficial for the counsellor for his work with school students. The need for a similar extension of school-counsellor services is perhaps not as marked in the urban community, but it may deserve scrutiny. The extension of guidance services and vocational articulation is another frontier challenging the province's schools and industries.

7. Providing vocational training and programs. While both junior and senior high schools have important vocational training functions to perform, they are probably not the best institutions in which to concentrate specific vocational training. The establishment of larger, more centralized training facilities, such as the Technical School in Calgary, have much in their favour. However, needed facilities can be determined only on the basis of careful analysis of the labour supply available in Alberta and elsewhere in Canada, of the relative income and status of occupations, of the geographic location of youth and of industry, and of the vocational interests of youth who would presumably use these facilities. When provision has been made for needed facilities attention should be given to assure that the vocational training they provide is free of charge to all qualified candidates. Some minimum subsistence provided by part-time work or scholarships should be available for students in training. The vocational training programs offered should: (1) continuously provide for the training and re-training of youth and adults; (2) be constantly adapted to technological changes; (3) be flexible in relation to varying amounts of work experience. It is suggested that admission to the various programs should be limited to those able to profit from them, with admission standards being regularly re-evaluated by the training staff assisted by representatives of industry and the public. Programs offered should be based on the best training methods known, including work experience and extension of apprenticeship to more occupations.

8. Encouraging and facilitating work experience for pupils in school. Many children in Alberta schools, particularly from junior high school grades on, seek work experience, particularly in the summer months. Legally, children may be employed at the age of twelve for such out-of-school work. However, in many communities work-experience opportunities are extremely limited. In Edmonton in 1957 over 900 school students registered for summer work at the National Employment Service, but only 400 vacancies were listed, many for single-day or half-day jobs. In view of the known benefits to students of the first-hand knowledge obtained

from work experience, this phase of their education for work deserves deliberate study and planning. Schools might well encourage, if not directly undertake, the organization of information on community job opportunities for students. Attention might also be given to the development of integrated work-study programs in Alberta urban high schools and junior colleges. This is another frontier of education and vocational training.

RECOMMENDATIONS

- 2. A Social Science Division of the Alberta Research Council should be created to undertake basic research and continuing scholarship in the social science fields with special reference to Alberta.**
- 3. Educational administrators should have some background in social sciences and those in control of large systems should have access to expert advice in the social sciences.**
- 4. The educational system should eliminate possible economic barriers to continued schooling.**
- 5. The educational system should overcome cultural inequalities in student backgrounds, in so far as this is possible.**
- 6. The school's program should be diversified.**
- 7. The school should promote a critical understanding of the occupational structure.**
- 8. The educational system should stress the importance and value to the individual and to society of a wide range of occupations to counteract youths' tendency to place high values on a limited number of occupations.**
- 9. The school should extend individual and vocational guidance in co-operation, where feasible, with community facilities.**
- 10. The educational system, in co-operation with government, business, and industry, should provide vocational-training programs.**
- 11. The educational system, in co-operation with government, business, and industry should encourage and facilitate work experience for pupils in school.**

CHAPTER 4

STAFFING ALBERTA'S SCHOOLS

Since the end of the last depression (1939) there has been a persistent shortage of teachers in Alberta, as is also true in most countries with a high standard of living. The problem facing school boards has been, and will be, that of finding a sufficient number of good quality teachers to staff the schools of the province. It is beyond question that the children in our society must be educated. The law requires it, and the public demands it. The Alberta Teachers' Association believes that the number of teachers available to staff our schools is increased by requiring high standards and by providing favourable conditions of work.

NEED FOR TEACHERS

Estimates of the number of teachers required in the future have been made on several occasions. These estimates all demonstrate a continuing and increasing demand for teachers. A brief summary, in chronological order, is given below.

1. B. Y. Card.

Population Trends in Alberta Affecting Teacher Demand and Supply. Faculty of Education, University of Alberta, December 10, 1952 (mimeographed). Table 7.

PROJECTED TEACHER REQUIREMENTS OF ALBERTA, 1951 - 1966

Year	Teacher Demand	Annual 10% Loss	New Teachers Needed for Pop. Increase	Annual Total of New Teachers
1951	6,932	751	49	800
1955	8,076	808	286	1,094
1960	9,792	979	358	1,337
1965	11,456	1,146	326	1,472
1966	11,780	1,178	324	1,502

It is of interest to check the teacher-demand forecast of 1952 with the number actually teaching in 1955. Mr. Card forecast 8,076; the actual total was 8,542.

2. Alberta's Economic Prospects—Brief to Gordon Royal Commission. Co-ordinated by Lawrence E. Kindt, Consulting Economist.

The section on "Alberta's Economic Education Prospects" on page 261 estimates the number of teachers required, based on the following assumptions:

- (a) One teacher will be needed for each 28 pupils.
- (b) Five per cent of the teachers in any one year will drop out of the schools, either temporarily or permanently.

Table IV was calculated after a study of the number of classrooms operating, and the number of new certificates issued from 1950 to 1954.

ESTIMATED NUMBER OF TEACHERS REQUIRED

	1965	1975	1985
Total Number of Teachers Required	11,400	13,500	17,200
Number of New Teachers Required	950	880	1,190

Footnote to table:

During the next decade, a total of 8,740 new teachers will be re-
were issued to 3,596 teachers, an average of 719 teachers per year.
During the next decade, a total of 8,740 new teachers will be re-
quired, or an average of 874 per year. These must be trained in
Alberta or induced to move to this province. Should the teacher
turn-over be greater than the very conservative figure of five per
cent, the need will be proportionately greater.

It is of interest to note how closely the total number of teachers estima-
ted for 1965 above (11,400) agrees with Mr. Card's estimate made in 1952
(11,456); and it should be borne in mind that figures to date have proven
Mr. Card's estimate to be low. The Gordon Commission submission used a
drop-out rate of five per cent, but calculations of the drop-out rate 1944-45
to 1956-57 show it to be approximately seven per cent. It is concluded that
the Gordon Commission submission estimate of teacher demand will be
too low.

3. Facts About Education's Number One Problem.

(Prepared for use at the One-Day Conference on Teacher Recruitment
and Retention, Macdonald Hotel, Edmonton, December 3, 1955.)

FORECAST OF TEACHERS REQUIRED IN ALBERTA SCHOOLS SCHOOL YEARS 1955-56 to 1960-61

(Compiled from Table II and Table III of the report)

	Year					
	55-56	56-57	57-58	58-59	59-60	60-61
Total Teachers Required at 28.5 per class	8,220	8,762	9,235	9,711	10,198	10,723
Number of New Teachers Required at 28.5 per class	1,371	1,243	1,212	1,253	1,303	1,383
Total Teachers Required at 25 per class	9,322	9,936	10,473	11,012	11,564	12,160

Footnote to table:

In 1954-55 the actual number of teachers under contract (8,191)
is considerably higher than the number of teachers required when
28.35 pupils per classroom is taken as a basis for the forecast
(7,507).

The annual drop-out rate was taken at eight per cent. The median
estimate for 1,960 above is 11,442. Compare this with Card's estimate
(11,400) and the Gordon Brief estimate (11,456).

4. Report of the Faculty of Education Space Committee

January 31, 1958. Appendix B. "Prediction of Faculty of Education Enrolment: 1967-68" by D. B. Black.

The author of this most recent estimate of need had the advantage of analyzing the previous estimates.

Based on present school population trends, teachers required 1967-68	15,250
Based on growth figures and students already in schools, teachers required 1967-68	13,250
Based on the projection of the number of teachers employed in schools (9,273 were teaching in 1956-57), teachers required 1967-68	16,500

Black uses a teacher-pupil ratio of one to thirty, an annual drop-out rate of eight per cent, and a training attrition, to estimate that in 1967-68 the province must train 1,350 to 1,550 certificated teachers to provide the necessary new teachers to staff Alberta schools.

The estimates by Black are higher than those made previously, but all previous estimates have been low. Black's estimates agree most closely with the 1955 predictions made for the One-Day Conference on Teacher Recruitment and Retention. Unfortunately, these latter predictions extend only to 1960-61.

5. Conclusions

The chief discrepancy in the figures quoted arises from the estimate of drop-out of teachers from the profession. The Gordon Commission submission uses five per cent, two other estimates use eight per cent, and Mr. Card uses ten per cent. A recent study of the drop-out rate in school divisions, 1954-55 to 1956-57, shows the rate to be slightly over seven per cent. A careful study should be made to determine the current rate.

In the light of the estimates just reviewed, this brief accepts the figure of 1,500 new teachers required for the year 1965 and 1,450 new teachers required for the year 1975.

RECOMMENDATIONS

12. A continuing study of the drop-out rate for the teaching profession in Alberta should be made.
13. Periodic estimates of the need for teachers to staff Alberta's schools should be made.

COMPARISON OF SUPPLY WITH NEED

1. In terms of adequately trained teachers

Any reasonable statement of the comparison of the supply of teachers with the need should take into account the implicit definition of "teacher". Too frequently this implicit definition is "a person authorized to teach", or

"a person certificated to teach". This neglect of the quality aspect of teacher supply tends to obscure the real problem and to present a false picture of the seriousness of the problem involved in staffing Alberta's schools with a sufficient quantity of qualified teachers.

The definition of a fully-qualified teacher accepted by the Alberta Teachers' Association is a person with a Bachelor of Education degree or equivalent. The fifty-second Annual Report of the Department of Education (1957, page 75) indicates that in 1956-57 in Alberta 2,150 of some 9,000 teachers held university degrees. These figures indicate the shortage of fully-qualified teachers.

It is not possible to determine from the figures published in the Annual Report of the Department of Education how many persons currently teaching have had four or more years of teacher education, three or more, two or more, and one or more. Such data would indicate still more clearly the qualifications of the present teacher force, and would demonstrate the relationship between the quality aspect of teacher supply and the current staffing of Alberta's schools.

2. Comparison of supply with need in terms of persons authorized to teach

The recognized sources of supply of new teachers are the teachers trained in Alberta each year, teachers who emigrate to Alberta from outside, and the re-enlistment of former teachers. The table below gives figures for the last four years.

SOURCES OF SUPPLY

	1954-55	1955-56	1956-57	1957-58
(a) Certificated teachers trained in Alberta	491	483	508	623
(b) Teachers from outside Alberta	292	238	305	305(d)
(c) Re-enlistment	267	267(e)	267(e)	267(e)
Total teachers	1,050	988	1,080	1,195
Student teachers (six week)	114	156	122	97
Total authorized personnel	1,164	1,144	1,202	1,292
Reported shortage, as of December	32	35	50	27

Footnote to table:

- (a) Includes all interim elementary certificates granted to intra-mural students in the junior elementary program, plus all B.Ed. degrees granted, plus the proportion of two year students granted certificates who are estimated to be going out to teach.
- (b) Based on certificates issued, excluding letters of authority.
- (c) Calculated for the year 1954-55 by the A.T.A.
- (d) Estimated from the year 1956-57.
- (e) Estimated from the year 1954-55.

COMPARISON OF SUPPLY WITH ESTIMATED NEED

	1954-55	1955-56	1956-57	1957-58
Estimated Need for new Teachers:				
(1) Card	1,065	1,094	1,120	1,230
(2) Facts About Education		1,371	1,243	1,212
Estimated Supply (from table above)	1,164	1,144	1,202	1,292
Reported Shortage	32	35	50	27

Since figures compiled in the past four years include estimates of needs, and estimates of supply, and actual shortage, it is clear from the above table that either set of estimate of need quoted above still leaves an actual shortage of persons to occupy classrooms. It is concluded that so far the estimates presented are too conservative. If the same factors continue to operate for these same estimates in future years, we may conclude that the estimates of need will be too conservative and that a continuing shortage of teachers will persist.

RECOMMENDATIONS

14. Data should be gathered and reported in such a way that the number of years of teacher education of persons staffing Alberta's schools is shown.
15. Periodic calculations of present and estimates of future sources of supply of teachers should be made.

THE HIGH-STANDARDS APPROACH

This approach argues that both the quality and the quantity of persons entering teaching are improved by more selective standards. The opposite view is that lower standards induce more persons to enter teaching, and that reduced length of training increases the actual quantity of teachers. The evidence which bears on these opposing views should be examined with great care.

The high-standards approach has been carefully defined by the National Educational Association, U.S.A. in "The Postwar Struggle to Provide Competent Teachers" *NEA Research Bulletin*, Vol. XXXV, No. 3, October, 1957, page 120, as follows:

The adoption and vigorous enforcement of professionally acceptable standards in (a) the selection of students for admission to teacher education curriculums (b) the strengthening of programs of pre-service preparation, with balanced emphasis on the general education and professional courses and experiences of the student (c) the transition of certification practices from emphasis on specific requirements to broad principles (d) the well-planned induction and orientation of the new teacher (e) a systematic program of stimulating inservice growth (f) the development of teacher welfare practices which assure the attainment of those many satisfactions which, along with a fair salary, comprise the total compensation of the professional teacher.

In the United States of America, the high-standards approach is supported by the following data from *Tabular Summary of Teacher Certification Requirements in the United States, 1955*, issued by the National Commission on Teacher Education and Professional Standards, N.E.A.:

In 1946, only 15 states required the bachelor's degree for the lowest regular certification of elementary teachers; in 1951 the number was 17 states; in 1953 the number was 27 states; in 1955 the number of states was 31.

For high school teachers, 49 of the 52 states and territories required at least four years of college preparation for initial certification in 1955. That this trend in the high-standards approach is continuing is shown by the statement that in 1957 "no fewer than 37 states have adopted, or are in the process of adopting, the standard of a college degree for minimum certification for elementary school teachers."

"The Postwar Struggle to Provide Competent Teachers", *NEA Research Bulletin*, Vol. XXXV, No. 3, October, 1957, page 123, indicates the results of this high-standards approach as follows:

In the states maintaining the degree standard for the certification of elementary-school teachers, students have been attracted to enter preparation for teaching at a faster rate than in the other states. It becomes increasingly clear that the high-standard attracts the discriminating student who is seriously interested in a professional career, while low standards drive him into other fields; concisely, low standards attract the person with no particular professional goals, who enters teaching only as a temporary kind of employment.

Certainly, there is solid evidence that the best students in the United States are interested in teaching. *Newsletter On Teacher Education and Professional Standards*, April, 1957, The National Commission on Education and Professional Standards, reports:

According to a report of the National Association of Secondary-School Principals, 30 per cent of the nation's top high school students last year indicated preference for teaching as a career. Next highest choice was engineering with 16.7 per cent. Other career choices ranged from 10.7 downward. The report was based on questionnaire replies from 12,154 student members of the National Honour Society. These were college-bound seniors who stood in the top five per cent of their classes.

There is one further bit of evidence on the effect of high standards on teacher supply in "The High-Standards Approach to Teacher Supply," a report of Special Group C, The Albany Conference, June, 1954, National Commission on Teacher Education and Professional Standards, 1201 - 16th St. N.W., Wash. 6, D.C. This document (page 11) quotes Ruth Stout (November, 1954, *NEA Journal*) as follows:

A check of the number of teachers prepared in the various states in 1952 and 1953 reveals a consistent pattern showing the positive effect of high standards upon supply, and the negative effect of low standards, not only in the ratio of degree to non-degree

teachers prepared, but in the total number of new teachers made available. While states with long-established degree requirements prepared 7.9 per cent more teachers in 1953 than in 1952, states which established degree minimums in 1950 and thereafter, prepared 12.18 per cent more teachers in 1953 than in 1952, the low standard (below degree minimum) states prepared 9.1 per cent fewer teachers than in the preceding year.

Alberta data tends to support the evidence just provided.

(1) A study of the Jr. E. Group (185) and B.Ed. group (122) of 1952 made in September, 1956, showed that 40 per cent of the Jr. E. group and 45 per cent of the B.Ed. group were teaching in September 1956. However, of the B.Ed. group who had secured professional certificates, 75 per cent were teaching.

(2) The effect of changing entrance requirements on enrolment in the Faculty of Education is shown by the following table:

**STUDENTS ADMITTED TO THE FACULTY OF EDUCATION
(EDMONTON AND CALGARY) 1950-51 to 1957-58**

Year	1950-51	1951-52	1952-53	1953-54	1954-55	1955-56	1956-57	1957-58
T.L. (1950-53)	424	302	276	271	410	397	418	528
Jr. E. (1954-58)								
1st Year B.Ed.	130	156	174	169	139	189	150	197
Total	554	458	450	440	549	586	568	725

While it would be hazardous to generalize from these figures without also considering economic, sociological and other pertinent factors, it does seem safe to say that the long-term effect of raising entrance requirements in both the one-year and B.Ed. programs has not reduced enrolments. One may conclude from the proportionately higher increases in admissions to the B.Ed. program that higher standards of admission actually attract better candidates to teacher education.

(3) The following table indicates a decline in quality of students in low entrance programs, and increase in quality of students in high entrance programs.

**PERCENTAGE OF STUDENTS WITH SIX SUBJECTS WITH A SIXTY
PER CENT AVERAGE (FACULTY OF EDUCATION, EDMONTON)**

Year	Jr. E.	B.Ed.
1952-53	---	63.1
1953-54	43.4	67.5
1954-55	38.0	84.9
1955-56	29.5	100.0
1956-57	33.1	100.0
1957-58	26.1	100.0

Conclusions from the three sets of data presented above appear to be that: (1) Longer training promotes greater retention of Alberta teachers
(2) Increased entrance requirements after the initial year do not decrease

numbers enrolled in teacher education (3) The trend of quality of candidates in any program tends to increase the quality in high admission programs and to decrease the quality in low admission programs.

RECOMMENDATIONS

16. The high-standards approach should be adopted by all the responsible authorities as policy with respect to staffing Alberta's schools.
17. A continuing study of the relationship between length of training and retention of teachers should be made.

ENTRANCE REQUIREMENTS FOR TEACHER EDUCATION

1. Recent History of the One-Year Program

From 1945-46 to 1949-50 inclusive, candidates were admitted to the Junior Elementary and Intermediate School Certificate Program if they held a high school diploma with "B" standing (50%) or better in English 3 and Social Studies 3, with or without complete matriculation for the Faculty of Education. The Interim Junior Elementary and Intermediate School Certificate was issued to candidates who completed successfully the one-year teacher-education program.

The entrance requirements were raised slightly in 1950-51 when the one-year Temporary License Program was introduced. Candidates were admitted to this program if they held a high school diploma with "B" standing or better in English 3, Social Studies 3, and a third Grade XII examination subject or with "B" standing or better and a 60 per cent average in English 3 and Social Studies 3. The Temporary License was issued to candidates who completed successfully the one-year teacher-education program. While the Temporary License might be extended, it could not be made permanent. By completing matriculation and six or seven approved courses in the Faculty of Education, holders of the Temporary License might qualify for the Standard E or Standard S Certificate which could be made permanent. Thus two years of basic teacher education beyond the matriculation then in force in the Faculty of Education were required for permanent certification. The admission requirements introduced in 1950-51 remained in force during 1951-52, 1952-53, 1953-54, and 1954-55. At the end of the 1953-54 university year, the Temporary License was withdrawn in favour of the Junior Elementary Certificate. The Interim Junior Elementary Certificate was issued to candidates who successfully completed the one-year teacher-education program. This certificate might be made permanent by holders of the matriculation requirements adopted by the Faculty of Education and applied first in 1954-55, provided they taught successfully in Alberta schools for two years and were recommended by a superintendent or inspector of schools.

The entrance requirements to the Junior Elementary Program were raised again in 1955-56 to their present level as stated in the 1957-58 University of Alberta Calendar on page 298: "For admission to the Junior E program (one year) : a high school diploma and standing ("B" or higher) in English 30, Social Studies 30, and a third Grade XII examination subject, with an average of 60 per cent in the three subjects. If the average in these three is less than 60 per cent, the applicant must present "B" standing or better in a fourth Grade XII examination subject."

2. The Bachelor of Education Program

The four-year Bachelor of Education Degree Programs provide for either the Standard Elementary or the Standard Secondary Certificate at the end of two years of an approved program of teacher education, and the Professional Certificate at the end of three years. From 1945-46 to 1953-54 inclusive, students were admitted to the Faculty of Education as matriculated candidates if they held the high school diploma with "B" standing or better in (a) English 3 and Social Studies 3; (b) *either* Algebra 2 and Chemistry 2; *or* two of French 3, Latin 2 and Music 3; *or* two of French 2, Latin 3 and Music 3; *or* any three Grade XII Department of Education examination subjects other than English 3 and Social Studies 3. (Music 30 was included in this group.) This was also the matriculation requirement that holders of the Junior Elementary and Intermediate Certificate or the Temporary License had to meet before being permitted to proceed toward the B.Ed. degree.

In 1954-55 the University of Alberta adjusted its matriculation requirements. At that time the Faculty of Education raised its entrance requirements to the Bachelor of Education Degree Programs. These requirements, as set forth in the 1957-58 University of Alberta Calendar are as follows: a high school diploma with "B" standing or better in English 30, Social Studies 30, and *four* of French 30, German 30, Latin 30, Chemistry 30, Physics 30, Biology 32, Mathematics 30, Music 30, and an average of 60 per cent on the six required Grade XII examination subjects. The effect of this increased entrance requirement on enrolment and on quality of candidates has already been described.

A problem is created by the entrance requirements to the Junior E program. In Edmonton 59 per cent of the 1957-58 Junior Elementary class have standing in three or more Grade XII examination subjects with a 60 per cent average. This means that 41 per cent of the class have standing in four subjects, but with averages anywhere from 50 to 59.5. This leads to four observations. First, many of these students, because of marginal admission standing, are doomed to failure in any respectable teacher education program. Second, many will never be able to achieve matriculation standing even though they receive marginal passes in their teacher-education program. Third, many will soon drop out of teaching because they will be frustrated by their inability to cope with the increasingly complex tasks of education. Four and most serious, many will struggle along with unhappy results to countless boys and girls of this province.

The legal basis for admission described so far has been academic. Since the Faculty of Education has the responsibility of recommending certification, the possibility of continual selection on the basis of mental and physical health, personality and character, is not ruled out. Research on the best methods of selection and guidance should be proceeding now with a view to gradual implementation.

RECOMMENDATIONS

- 18. The entrance requirements to the Bachelor of Education degree program should be maintained on a parity with those required in other faculties of the University of Alberta.**
- 19. The entrance requirements to the Junior Elementary program should be raised immediately to matriculation level making admission requirements to the Junior Elementary and the Bachelor of Education programs the same.**
- 20. A continual selection and guidance procedure should be adopted prior to and during the teacher-education program of candidates for certification, with consideration being given to some or all of the following devices in addition to academic standing: estimates of moral and emotional stability, a health examination, a speech test, principal or counsellor personal-inventory, the results of an interview by a board which should include a competent teacher, and performance in student teaching.**

FACILITIES AND PROGRAMS FOR TEACHER EDUCATION

Since 1945 all teacher education in Alberta has been centred in the Faculty of Education, University of Alberta. Through its programs the Faculty of Education performs four important functions. The first of these is the preparation of teachers. To this end three avenues are open.

The one-year program leading to the Interim Junior Elementary Certificate consists of one content course in English, seven half courses and three full courses devoted largely to developing competency in the techniques of teaching, and a substantial block of student teaching under controlled and supervised conditions.

The four-year program leading to the Bachelor of Education degree, planned as it is with a balance between academic and professional studies, may be followed by one of two routes. One of these is planned to prepare teachers for the elementary, the other for the secondary school. The program has a sound base in the psychology, philosophy, and sociology of education. Some specialization is possible through a judicious choice of major and minor fields of study. A further possibility for specialization is provided through the B.Ed. in Industrial Arts degree program. The Alberta Teachers' Association endorses the Bachelor of Education program as the most desirable of the three avenues for teacher education. The

Association believes that a program planned from the start, involving four years of integrated academic and professional education toward a chosen goal in teaching, is the most adequate and effective preparation for teachers that is at present available.

The nine-course program leading to the B.Ed. degree for holders of the B.A., B.Sc. or other approved degrees provides a third plan of teacher education.

A second function of the Faculty of Education is the preparation of graduate students. Through the Faculty of Graduate Studies the Divisions of Educational Administration, Elementary Education, Educational Psychology, and Secondary Education provide programs leading to the M.Ed. and Ph.D. degrees.

A third and growing function of the Faculty of Education is the planning and conducting of educational research. Through the co-operation of the A.T.A., the A.S.T.A., the Department of Education, the Alberta Federation of Home and School Associations, and the University of Alberta, the Alberta Advisory Committee on Educational Research assists the Faculty in developing and financing its research program. *The Alberta Journal of Educational Research* provides one means of publicizing the studies being made by staff and students.

A fourth function of the Faculty of Education is service to teachers, school boards, the Department of Education, and other groups interested in education. Through the Summer Session and the Evening Credit Program, contributions to institutes, zone meetings and conventions, the Faculty is serving to the extent of its resources.

To perform its functions the Faculty of Education has a staff of approximately fifty on the Calgary and Edmonton campuses. Increasing enrolments and expanding functions call for increased space. In Calgary a new education building is to be erected on the new site of the University of Alberta. While at present only the Junior Elementary, the first two years of the B.Ed., and the first three years of the B.Ed. in Industrial Arts degrees are offered, the extended facilities will make possible within a short time the offering of all four years of the B.Ed. programs. In Edmonton all phases of the work of the Faculty are performed except the offering of the first three years of the B.Ed. in Industrial Arts degree. The present Education Building has become inadequate to meet the needs of teacher education in Edmonton. A report of the space needs of the Faculty of Education in Edmonton was presented to the President of the University in 1958. This report was endorsed by the Board of Teacher Education and Certification, one of whose duties is to advise the President of the University and the Minister of Education concerning the needs of the Faculty of Education. The report estimated that staff, facilities, and space required by the Faculty of Education in the next ten years would increase by two and one-half times the present figures.

The Alberta Teachers' Association takes the position that the importance of teacher education warrants the most sympathetic and prompt

action with respect to necessary staff, facilities and space. Any fundamental improvement in education will always in the last analysis depend on the quality of teachers staffing Alberta's schools. The Association therefore urges all the responsible authorities to provide the staff, space, and facilities required for an adequate and effective program of teacher education.

The extension of the facilities of higher education has a general effect on staffing Alberta's schools. It is known that in any institution of higher learning, the proportion of students coming from the immediate neighbourhood is high. Therefore, the extension of university facilities in Calgary, and of junior college facilities in Lethbridge and other suitable centres, will tend to increase the number of persons with higher education, some of whom will enter the teaching profession.

RECOMMENDATIONS

- 21. The Alberta Teachers' Association asks that the Commission recognize and commend the willingness of the University of Alberta to expand staff, facilities, and space of the Faculty of Education.**
- 22. In order that the quality of teacher education, graduate studies, and research may be maintained and strengthened, the Association urges that the Commission recommend that the University of Alberta continue to provide sympathetic and prompt action with respect to the needs of the Faculty of Education.**
- 23. The Association further recommends that the growing needs of the Faculty of Education in Calgary with respect to staff, buildings, and equipment should be recognized.**
- 24. The Association endorses the four-year Bachelor of Education program as the most desirable form of teacher education and recommends that as soon as possible degree programs be established as the sole basis of teacher education and certification in Alberta.**
- 25. The facilities for higher education, including Junior Colleges, should be extended.**

CERTIFICATES AND CERTIFICATION REQUIREMENTS

1. Certification Requirements in Alberta

The certificates currently issued for completion of approved programs in the Faculty of Education, University of Alberta, are the Interim Junior Elementary, the Interim Standard E, the Interim Standard S, and the Interim Professional. Each of these may be made permanent by the holder completing requirements laid down by Order-in-Council. Certificates formerly held; namely, High School Academic, First Class, Elementary and Intermediate, Second Class, may be exchanged for those currently issued. The

Commission is no doubt aware both of the basis on which certificates are now issued, and the basis on which the exchange to the currently-issued certificates may be effected.

Between 1950-51 and 1953-54, students completing the one-year program of teacher education were given a Temporary License to teach. While this Temporary License might be extended, it could not be made permanent. Instead, the first permanent certificate, either the Standard E or the Standard S, was to be issued for two approved years of teacher education beyond matriculation. (The Temporary License program was to count as the first of the two basic years of teacher education.) In 1954, contrary to the advice of the Board of Teacher Education and Certification, a change was made whereby the Temporary License was withdrawn and permanent certification based on one-year of teacher education plus matriculation was re-introduced. This occurred at the very time that the Province of Saskatchewan, following recommendations from the Western Canada Regional Conference on Teacher Education, composed of representatives from British Columbia, Alberta, Saskatchewan and Manitoba, was raising the requirement for permanent certification to two years of teacher education. In the opinion of the Alberta Teachers' Association, Alberta took a backward step in 1954, a backward step which has had negative effects beyond our provincial borders. Rather than see certification based on short-term programs of preparation, the Alberta Teachers' Association is committed to a policy of basing certification eventually on a four-year teacher education program which includes a university degree.

The Alberta Teachers' Association is also committed to a policy which calls for general certification rather than restricted or even special certification. Rather than have the number of special certificates increased, the A.T.A. would prefer to see specialization completed within the framework of a four-year teacher education program as is possible through the provision of majors and minors of the Alberta B.Ed. degree program, through the B.Ed. in Industrial Arts degree program, or through the B.A., B.Sc., B.Comm., B.Sc. in Home Economics, B.P.E., and B.Mus. followed by a B.Ed. degree program, or in some cases through post B.Ed. programs.

2. Trends in Certification Requirements

England, until recently, has required a two-year teacher education program as a minimum. Last year the period of preparation in a Teachers' College was extended to three years. Scottish teachers education has followed a similar pattern except that the three-year program of teacher education has been in existence much longer. In the United States there has been, since the Second World War, a distinct trend toward improved and extended programs of teacher education. The December, 1957, newsletter of the National Commission on Teacher Education and Professional Standards includes this statement: "The postwar record indicates that high standards of preparation and admission to the profession tend to stimulate interest of youth of high ability, while low standards discourage them." The trend toward higher qualifications for certification in the

United States is illustrated in a *Tabular Summary of Teacher Certification Requirements in the United States* (1955) from which the following statement is quoted:

In 1946, only 15 states required a bachelor's degree for the lowest regular certification of elementary teachers; in 1951, the number was 17 states; in 1953, the number was 27 states; in 1955, the number was 27 states; in 1955, the number of states was 31. Since 1946, 32 states have increased minimum requirements for elementary teachers, 14 states for high school teachers, 32 states for elementary principals, and 29 states for high school principals. (In 1955, 45 states required a minimum of four years of preparation for an initial certificate for high school teachers.)

Surely as the job of education becomes more complex, we require better educated teachers to staff our schools. This at least was what "The Status of the Teaching Profession", *Canadian Education's 1949 Report, Part II*, item 4(a), p. 139, and item 14, p. 141 asked when it recommended the following standards of teacher selection and preparation:

1. That qualifications for a certificate valid for teaching any high school grades include a university degree, the course for which has included at least two years of study at the university level of two high school subjects in which the teacher has received special professional training
2. That each province be asked to consider granting only one interim license to beginning teachers; that records of further professional qualification as acquired be retained by the teacher as endorsements of this license; and that the license be exchangeable for a professional certificate when the holder has had two years' successful experience and possesses a university degree.

It is also what was implied when the 1958 Canadian Conference on Education adopted without qualification the resolution that:

candidates for entrance to the teaching profession should be required to have complete senior matriculation or the equivalent, and that the required professional preparation should be established immediately at a minimum of two additional years, with a view to adoption in the near future of a minimum of four years of academic and professional study, and that the permanent teaching certificates or diplomas be granted only to persons who have met these standards.

RECOMMENDATIONS

26. The Province of Alberta should move toward a basic four-year period, which includes a college or university degree, for initial general certification of teachers for the elementary and secondary schools of Alberta.
27. As an intermediary step between certification as in 1958 and the requirement of a basic four-year period of teacher education, the Province of Alberta should return immediately to two years of teacher education as the minimum for permanent certification.

28. General certification should be basic to teaching in our elementary and secondary schools, and placement of teachers in specialized positions should be governed by the nature of their preparation rather than by special certification.
29. Special certificates should eventually be withdrawn in favour of a single general teaching certificate as recommended in number 26 above.

DISTRIBUTION OF TEACHERS

If sufficient numbers of teachers can be found to meet total demand, there is still a possibility of a teacher shortage with respect to urban and rural distribution of teachers, and with respect to grade level. This would occur if some individuals decided not to teach rather than to teach in isolated areas, or to teach Grade I, and so on.

The problem is illustrated in the following quotations from the Annual Report of the Department of Education, 1956, page 18:

In general, teachers were available in sufficient numbers for the elementary school classrooms. A small number of schools, mainly in remote areas, operated as correspondence instruction centres with supervisors in charge. . . . The shortage of well-qualified high school teachers increased during the year. . . . Several areas provide teacherages at nominal rental and isolation bonuses to make rural positions more attractive.

Consolidation has improved the problem of rural placement. In June 1935 there were 2,934 one-room schools in operation in Alberta. In June 1957 there were 512. The effect of centralization is noted in the 1956 Annual Report, p. 20, as follows: "Teachers are more readily available for rooms in graded centralizations than for rural ungraded schools." However, there is some practical limit to consolidation and a residue of isolated ungraded rural schools will remain. As the population of the province becomes increasingly urban and decreasingly rural, the number of isolated ungraded rural schools might even increase.

With respect to grade level placement, the factors which most immediately bear on present shortages are: (1) the sudden and rapid increase of demand for teachers in the secondary school. Enrolment in senior high school was forecast to increase 92 per cent from 1954-55 to 1960-61 in "Facts About Education's Number One Problem." (2) Training preferences of teacher candidates in the B.Ed. program. This was approximately 50 per cent electing to train as secondary teachers without bursary support prior to 1957, but rose to 80.6 per cent in 1957-58 when bursary support was extended to candidates for the secondary route. (3) The higher qualifications demanded by school boards for high school teachers. In 1955-56, some 80 per cent held university degrees.

The Alberta Teachers' Association contends that the solution of the urban-rural distribution of teachers lies in making the conditions of work

equally attractive. If rural areas fail to attract teachers otherwise, salaries should be raised, attractive teacherages should be provided, and the community should improve the status of the teacher. In isolated areas a special isolation bonus should be made available. In all rural areas conditions must be such that the teacher can look forward to long and secure tenure. In the past the average teaching stay, in areas other than cities, has been approximately four years. The circumstances which produce such mobility must be corrected if the non-city areas of the province are to attract and retain well-qualified teachers.

With respect to grade-level distribution of teachers, the Alberta Teachers' Association believes that the qualifications and experience of teachers should determine salary, and that the available positions will eventually determine supply of teachers. The Association holds that freedom of movement for teachers, the right to seek employment at the grade level of the teacher's preference, and an increase in the number of fully qualified teachers will solve the problem of distribution of teachers.

RECOMMENDATIONS

- 30. Teachers must have freedom of choice of urban-rural location and grade level in Alberta's school system.**
- 31. The salary of teachers should be determined by qualifications and experience; however, isolation bonuses might be paid to teachers in remote locations.**
- 32. In areas and at grade levels where school boards are experiencing difficulty in staffing Alberta's schools, the boards should examine the conditions of work with a view to making them more attractive to teachers.**

RECRUITMENT PROCEDURES

1. Guidance

It is known that education secures a fairly constant proportion of high school graduates, and it is argued that the best way to increase the supply of teachers is to increase the supply from which they are drawn. The Alberta Teachers' Association supports any effort to increase the holding power of our high schools, particularly with respect to those students who have the ability to continue to further education. The Association opposes the use of school guidance, career events, or teacher influence to pressure students into choosing teaching. The position of trust held by teaching personnel requires neutrality with respect to recruitment for any profession. This does not, however, preclude efforts to provide information on any career, or to increase retention of students. Such measures as providing a more varied and interesting range of high school offerings, exercising better guidance to match abilities to programs, and studying of drop-outs in local situations, should help to increase the school's holding power. It is reasonable to assume that education would benefit if more males were to enter the profession.

2. Recruitment Campaigns

Fair and impartial information about teaching as a career, especially when presented along with similar information about other careers, undoubtedly aids recruitment of teachers. The career events commonly held in Alberta fulfil this function. The providing of information in brochures and posters, the awakening of the public to the social problem involved, and the securing of cooperation among interested bodies, are all worth-while activities. The Alberta Committee on Recruitment and Retention, the Coordinator of Teacher Education, and the Director of Guidance, have all done valuable work.

3. Scholarships and Bursaries

Consistent with its view that four years of university education leads to adequate qualification, the Alberta Teachers' Association offers eleven teacher education scholarships beyond the second year. The Government of Alberta already offers a considerable range of bursaries as follows: (1) For the Standard E or Standard S program a \$200 bursary for first year plus fees for two years totalling \$340, and in addition, for the Standard S program, \$200 bursary for second year; (2) summer session bursaries of \$100 for teachers with at least two years training; (3) Junior E program, a \$200 bursary plus fees amounting to \$170; (4) bursaries and remission of fees totalling \$600 for graduates entering teaching.

The Alberta Teachers' Association would welcome the extension of the bursary program to cover each year of the four-year Bachelor of Education program. In keeping with the Association's emphasis of quality of teacher candidates, the bursaries should be extended only to students with matriculation standing. These measures would tend to encourage candidates to take more extended training, which has been demonstrated to be related to retention.

RECOMMENDATIONS

- 33. The school systems of the Province should endeavour to increase the supply of high school graduates through guidance services, through remedial action based on drop-out studies, and through a wide and varied high school curriculum.**
- 34. Efforts should be made to increase the proportion of men entering the teaching profession.**
- 35. Information about teaching as a career should be readily available for any interested young person.**
- 36. Policy on scholarships and bursaries should be adopted to encourage candidates to take four years of teacher education.**

RETENTION PROCEDURES

While recruitment may be of some value, the Alberta Teachers' Association believes that the problem of staffing Alberta's schools will be solved by improved retention of teachers. If the average professional life of

Alberta teachers can be increased by five to ten years, the number of new teachers who must be found each year will be halved. Retention is affected by many factors. Living and working conditions in the profession are perhaps the most important.

1. Orientation, In-service Education, and Placement

Teachers new to a staff or system require some orientation, and beginning-teachers require more. The smooth transition into a regular working member of the teaching force reduces frustration, increases confidence, and improves retention. Such measures as workshops, handbooks, conferences with school officials, and help from experienced teachers all provide orientation.

To be effective, in-service education must be based on a thorough program of teacher education. It can never be a substitute for basic teacher education.

When it speaks of in-service education for teachers, the Alberta Teachers' Association excludes courses taken for credit in the Summer Session or the Evening Credit Program. Such courses it considers as part of the basic academic and professional degree program which would ideally be completed as part of the pre-service preparation terminating in a degree and teaching certificate. The Alberta Teachers' Association thinks of in-service education as a means of professional orientation and improvement rather than one of removing deficiencies. In other words, the Association takes the positive and professional approach to in-service education. For that reason, the Association believes that teachers should themselves share in the planning of such activities.

Every modern profession recognizes and accepts the need for keeping its members up-to-date on new practices by in-service education. This can be divided broadly into two types: (a) in-service education during school hours, organized by the administration in co-operation with the teachers' association; (b) in-service education out of school hours, organized by the teachers' association in co-operation with the administration. Thus, staff planning or action research to solve some educational problem may be either of these types.

Examples of in-service activities approved by the Association are easy to find. The orientation, in-service, and curriculum workshop programs provided on a co-operative basis between the teaching and administrative staffs of our major city school systems are commendable efforts, as are the numerous institutes on various curriculum areas and other professional problems that form the basis of innumerable workshops in which teachers, school superintendents, Faculty of Education staff, Department of Education personnel, and school boards share in one way or another.

The physics workshop conducted at the University of Alberta in the summer of 1956, the science workshop sponsored by the Imperial Oil Company of Canada during Easter week in 1957, and the Principals' Leader-

ship Course held in July in 1956 and 1957, and to be repeated in 1958, are excellent aids to in-service education. These make it possible for teachers in specific fields to bring themselves abreast of new developments and to appreciate more fully the practical applications of basic theory, or they provide new concepts of the task of the teacher and administrator and new approaches for accomplishing the goals of education.

In the many in-service programs that have been developed in Alberta, the Alberta Teachers' Association recognizes with appreciation the contribution of school boards, industrial and financial corporations, the Department of Education, and the University of Alberta. The Association appreciates the participation of teachers in the planning of the various in-service activities mentioned above.

The goal of all in-service education of teachers must, to be justified, be the better education for the boys and girls of Alberta. It must be motivated by unselfishness and sincerity. As a by-product, it results in teacher satisfaction and the retention of teachers in the profession.

The placement of teachers affects retention. When teachers are placed according to their wishes and abilities, they are more satisfied and remain in the profession. Many beginners quit because they started in a "tough" junior high school room, whereas, had they started in a well-behaved Grade IV class, they could later have handled the "tough" junior high school room. Other teachers complain that having been educated for years to teach a particular group of high school subjects, they are assigned a different group of subjects, or are placed in the elementary school. The transfer of teachers within a system can create, for reasons like those just described, great dissatisfaction. School boards should exercise care in placing teachers in positions which satisfy their preferences and abilities.

2. Professional and Political Freedom

One of the bulwarks of a free society is the freedom of its educators from political influence. Either full or quasi-civil service status, arrived at through economic controls, tends to check political and intellectual expression which may be unpopular with political authority. Our society is dependent upon the right of free inquiry, free expression, and the free exchange of ideas.

It is inconceivable that teachers who accept a controlled relationship can effectively develop the independence of thinking and expression so essential to modern society. It is more likely that a new generation of students may emerge who are willing to conform to the same relationships of state and individual as those accepted by the teachers. In Canada, a short time ago, 75 per cent of the labour force was self-employed; today this figure is 25 per cent. As a consequence, there is an ever-diminishing area of individual freedom of action. There is evidence that in the world of tomorrow, education will attract large numbers of men of ability and talent. No retrograde steps should be permitted today which would deny

to society the effective use of this leadership in our public and intellectual life.

3. Salaries, Tenure, and Pension

Salaries of teachers must be made comparable to those of other professions with similar training. While minimum salaries of degree teachers compare favorably with those of engineers, the maximum salaries do not. Even the principal of a large school does not receive as much salary as is paid to many junior executives of small business and industrial companies. In 1958 not one principal in Alberta had a salary of \$10,000 per year. In order to attract ambitious and able high school graduates into education, Alberta needs to have top salaries in education comparable with those paid in other occupations; for example, several hundred positions paying annual salaries of at least \$15,000.00.

The security of tenure in school systems in Alberta outside of the cities is not good enough. All teachers are subject to transfer at any time. Principals of schools may be dismissed from their positions without appeal to the Board of Reference. In either of these circumstances, appeal to the school board which made the transfer or dismissal are usually futile. In the case of a principal dismissed from his principalship, an appeal to the Minister of Education is permitted. Such appeals have proven unsatisfactory, since the investigating official appointed by the Minister often acts as police, jury and judge. He sometimes takes statements privately and confidentially, and not in the presence of the principal or his representative. Tenure under these conditions is unsatisfactory, with the result that outside of the cities there is a large turnover of principals and assistant principals. This is not in the best interests of education.

Many young people today are concerned with such matters as pensions and other benefits. The maximum pension for a teacher is approximately 53 per cent of his average salary for a continuous five year period. This is much lower than the customary 70 per cent in business, industry, or government service. School boards in Alberta do not contribute anything toward the teachers' retirement fund, as contrasted with the customary one-half contributed by business and industry. Group insurance, hospital, and medical benefits are common in business and industry, but the Alberta School Act permits only city school boards to contribute toward such plans. In general, teachers' pensions do not compare favourably with those of workers in business, industry, or government.

RECOMMENDATIONS

- 37. Salaries of teachers should be made comparable to those of other professions with similar training, especially with respect to maximum salaries.**
- 38. Teachers, principals, and vice-principals should have continuous contracts.**

39. A school board should have the right to terminate a contract with a teacher, principal or vice-principal by giving thirty days' notice at any time during the year, except July and August, to be subject to appeal to the Board of Reference.
40. A teacher, principal or vice-principal should have the right to resign
 - (a) by giving thirty days' notice between June 1 and July 31, to take effect in July or August,
 - (b) by giving thirty days' notice at any other time during the year, such notice of termination to be subject to appeal to the board of reference by the school board.
41. All proposed transfers of teachers not mutually agreed upon should be subject to appeal to a committee of the school board and the local teachers' association, or to a neutral body, where evidence is given under oath and subject to cross-examination. School boards should contribute to pension and health benefits for their teachers.

4. Increased Status for Teachers

Staffing Alberta's schools is intimately bound up with the status of the teaching profession. When the public regards a vocation as important, worth while, requiring special skill, and worthy of respect, then the profession is awarded prestige and status. Teaching as a profession eventually must be regarded in this way in Alberta.

All of the preceding measures recommended will tend to improve the status of Alberta teachers. This brief has demonstrated that for the next two decades there will be a continuing high demand for teachers. The sources of supply from new teachers educated, from immigration, and from re-enlistment will fall short of demand and continue a teacher shortage unless young people are attracted into and retained by the profession. The Alberta Teachers' Association believes that the best way to do this is the high-standards approach. This approach has worked in the United States of America, in England, and in Scotland. This brief brings forward evidence to show that in Alberta both quality and quantity of teachers are increased by high standards.

To this end the entrance requirements of the Junior Elementary program should be raised to matriculation, and the facilities, staff, and space of the Faculty of Education must at all times be kept adequate to provide an effective four-year Bachelor of Education program. Permanent certification should require two years of teacher education immediately, and policy should look forward to a single general certificate issued for four years of degree work.

The status of teachers, and the resulting well-being of Alberta education, will be improved by improved living and working conditions for teachers. Teachers must be free to work according to their preferences and ability. Scholarships and bursaries can encourage adequate prepara-

tion, while guidance and recruitment campaigns can keep information on teaching as a career, along with information on other careers, readily available for young people. Improved orientation, in-service education, and placement tend to increase teacher competence and teacher satisfaction, thus improving general teacher status. Finally, adequate salary, pension, and tenure are required to provide the economic security basic to high status.

CHAPTER 5

FINANCING EDUCATION AND SUMMARY OF PART III

FINANCING EDUCATION

According to the British North America Act, Section VI, Subsection 96, each of the provinces "may exclusively make laws in relation to education." The prime decisions which determine whether local government units shall participate in the provision of public education rest with provincial governments.

The purpose of the public education system is to provide for each generation of youth the opportunity to learn. If public education is to serve its purpose, a desirable program must be available to each youth during the school-age years. This time element makes education a unique function of government. Few other government functions merit competition with education for immediate and adequate financial support. The system whereby education is financed indicates where education stands in the scale of government values.

The Province of Alberta has tended to maintain standards of education through such means as supervision, certification of teachers, development of curriculum, and examinations. These facets of provincial control, together with compulsory attendance laws, ensure a basic provision for education, below which no locality may fall. This does not imply that the Alberta Teachers' Association accepts present standards as being adequate.

The young people of one community grow up and emigrate to other communities. The results of education offered in one community become the legacy of the other. The importance of a sound education goes beyond the smaller community; it is of significance to the province as a whole, to the nation, and to the international community. It is logical, therefore, that a desirable kind of basic education must be offered in every Alberta community. The province must view realistically the necessity to finance education in an equitable manner, to make possible the kind of education desired in all communities.

Financing education in Alberta is the responsibility of both local and provincial government, but local ability to finance education varies markedly from one community to another. The sharing of responsibility for education is desirable, but sharing introduces gross inequalities of financial burden to local units. Wide ranges in assessment per pupil, per teacher or classroom required, are indicative of wide ranges in local ability to pay a given portion of the total education bill.

Provision should be made for innovation, since the educational system will develop as a result of local initiative, from testing and accepting or rejecting ideas. In addition to basic grants, the province should encourage

innovation in public education through a supplementary system of incentive or stimulation grants.

The apportioning of provincial funds for education requires the measurement of the need for education services and facilities. Need may be measured in terms of pupils, teachers or classrooms; the choice of unit depends upon various factors to be taken into consideration before the selection is made. Regardless of which unit is chosen, each is a direct measure of education services required.

There have been suggestions that the total population of a local area is a reliable measure of the need for education services. This measure of need assumes that the number of children per thousand of population is the same throughout the localities of the province. There is evidence to indicate that the ratio varies sufficiently to cause this approach to be unsuitable.

At present, provincial grants are paid specifically in recognition of certain services performed or facilities and equipment provided. In this sense, provincial grants are conditional; if no service or equipment is made available, no grant is paid. Provincial grants are paid directly to school authorities and therefore are earmarked, as it were, for future expenditure on education.

Conditional grants involve some danger. Since they are paid for approved equipment and services, they sometimes provide incentive to spend money where money should not be spent. Earmarked grants, on the other hand, guarantee that the provincial moneys intended to maintain a certain standard of education will be spent for education purposes.

In contrast to the above, there are indications that a new provincial-local finance system may not earmark provincial aid for education. The implication is that from the whole amount of money available, education will have to compete for every dollar it gets. The province cannot maintain an adequate program by subjugating the needs of education to the politics of local finance. To ensure an adequate program, provincial moneys in aid of education must be earmarked for expenditure upon education.

Public education in Alberta is accomplished through a partnership arrangement between the provincial government and school boards or counties. This arrangement is implemented through *The School Act*, which assigns various duties and powers to local governing bodies. It is desirable that the province provide for local interest in and local responsibility for education. The assignment of duties to school boards must be accompanied by whatever degree of power may be required to carry out those duties. School budgets should never be subjected to the stamp of approval of municipal councils.

RECOMMENDATION

42. Any system of school administration should provide for:

(a) Elected school boards

- (b) **Fiscally independent school boards**
- (c) **Equalization grants**
- (d) **Direct grants to school boards.**

SUMMARY OF PART III

The Alberta Teachers' Association presents the view that in planning for the future of Alberta's education, an understanding of the society this education serves is essential. Evidence has been presented to show that in the future more technically trained personnel will be required. It is concluded that this training is not the sole responsibility of the school, but must be shared by other segments of society. Hence the school cannot look solely to the need for technical personnel for guide lines for future plans.

Within the school's responsibility for training technical personnel the difficult problem of vocational versus liberal education remains. The trends in automation, geographic distribution of vocations, horizontal, promotional, and social mobility, would all point away from a narrowly vocational curriculum. These trends rather emphasize the importance of the school curriculum in developing broad understandings, skills in human relationships, personality and character traits.

The present knowledge about population trends, employment trends, and trends in the production and distribution of goods in Alberta is inadequate as a basis for the co-ordination of school services with these developments. Further study of such matters, and the distribution of this information to educational planners, is essential.

This brief has examined the estimates of future need for teachers and the sources of supply. The conclusion is that a continuing shortage of teachers will prevail unless vigorous counter-measures are taken. Because of our complex society, our resulting diversified curriculum, and the sophistication of modern youth, thoroughly prepared teachers are required for Alberta. The Alberta Teachers' Association endorses the high-standards approach to staffing Alberta's schools. This would mean careful selection of students for admission to teacher education; an extension of the training period to four years; a general certificate for such fully trained persons; co-operative orientation, in-service education, and placement procedures; and welfare and salary levels comparable with professions with similar educational requirements. High standards will improve retention of teachers in the profession. This retention is fundamental to adequate staffing of Alberta's schools.

For education to perform the tasks required of a modern society, an adequate financial basis is essential. The Alberta Teachers' Association believes that fiscally independent school boards, supported by a high level of provincial equalization grants, can best provide the financial basis required.

CHAPTER 4

THE CURRICULUM

THE ADEQUACY OF THE ALBERTA CURRICULUM

The Alberta Teachers' Association believes in the importance of equality of educational opportunity for all children in the province. This means that every child should be given the opportunity to participate in intellectual and extra-curricular experiences suited to his aptitudes and abilities. Part of the aim of education is the need to develop in each child both broad literacy and general citizenship. While we believe that this may be accomplished by the well-prepared teacher using a variety of methods and a diversified curriculum, we reaffirm and believe that both the curriculum and the methods of teaching should be under constant review and research.

PART IV

CHAPTER 6. THE CURRICULUM

CHAPTER 7. PUPIL PROGRESS

CHAPTER 8. SPECIAL NEEDS

CHAPTER 9. ORGANIZATION AND ADMINISTRATION

CHAPTER 10. JUNIOR COLLEGE, TECHNICAL, AND AGRICULTURAL EDUCATION

CHAPTER 6

THE CURRICULUM

THE ADEQUACY OF THE ALBERTA CURRICULUM

The Alberta Teachers' Association believes in the importance of equality of educational opportunity for all children in the province. This means that every child should be given the opportunity to participate in curricular and extra-curricular experiences suited to his aptitudes and abilities. Basic to the aims of education is the need to develop in boys and girls both broad literacy and democratic citizenship. While we believe that this may be accomplished by able, well-prepared teachers using a variety of methods and a diversified curriculum, we re-affirm and believe that both the curriculum and the methods of teaching should be under constant review and research.

1. The Elementary School

In Grades I-VI are laid the foundations of formal education and, to a large extent, of life. Not only must the elementary school know the needs of pupils as individuals and as members of the social group, but also it must anticipate what those needs will be in the immediate future. Since for many pupils the elementary school will provide all the education they will receive, its program should be so rounded as to give them a basis for living in our kind of society. At the same time the elementary school must provide the foundation for those who will proceed to the junior high school and beyond. This implies, of course, that the elementary school in a democratic society accepts all children and that it must therefore provide for a wide range of abilities. In this it has probably achieved better than either the junior or senior high schools. The elementary school has been sensitive to the findings of educational research and has adapted its programs, especially in reading and arithmetic, to these findings. Considerable effort is made in the elementary school to provide for individual differences by one means or another. Sometimes this is done by ability grouping within a given class. Sometimes it is done by providing special classes for the specially gifted or for those with mental or physical defects. Sometimes it is done by organizational plans which provide for varying rates of promotion.

Certainly the elementary school should provide the child with certain skills he will need. These include those skills basic to reading, writing, and arithmetic, and social studies with its integration of history and geography. Beyond this, the curriculum should help each child to develop his own potential, not only in the basic areas just mentioned, but also in such expressive areas as art, music, drama, and physical education.

While on the whole the curriculum of the elementary school has kept pace with the best research in education, it has suffered most from the

teacher shortage for it is in the elementary school that the most poorly trained teachers are found. The best curriculum in the world needs first-rate teachers. A curriculum such as ours, complex and demanding as it is, requires the most able, resourceful, and well-trained teachers possible.

RECOMMENDATIONS

43. Studies should be made to determine the best grade placement of the subject-matter of the elementary school curriculum.
44. Studies should be continued to determine the value of various methods for dealing with individual differences, including multi-rate promotion, grouping, and enrichment.
45. Studies should be made to determine the efficiency of various teaching techniques including the enterprise.

2. Junior High School

The Junior High School, grades 7-9 inclusive, was introduced into Alberta in the mid 30's as an intermediate type of organization between the elementary and the high school. This organization is based on the assumptions:

- (1) that physiological and intellectual needs of children 11 or 12 to 14 or 15 are best met by having their educational experiences organized separately;
- (2) that while many students will continue their education beyond the compulsory leaving age of 15, that age, which roughly corresponds with grade 9, marks the terminal point in the education of many Alberta children.

The Junior High School was, therefore, planned to provide a reasonably well-rounded education for those leaving school at the end of grade 9 and a foundation for those continuing their education in the high school. Rather than segregate students at age 11 plus as is done in the multiple track system of Britain, the junior high school type of organization is based on a program consisting of a common core of basic subjects supplemented by a number of exploratory and cultural options. At its inception the junior high school was thought of as a separate unit and the expectation was that, in large centres at least, the junior high school would be housed in a separate building. This, of course, has not generally happened.

The tendency is that the junior high school be included in a combined junior-senior high school type of organization, or in an elementary-junior high school type of organization. The former seems more common in British Columbia, the latter in Alberta, especially in Edmonton. The chief criticisms of the latter type of organization are: that children of junior high school age are less stimulated by being associated with elementary school students than they would be if separate from them, and that they demonstrate a sense of importance beyond their years. The argu-

ment in favour of a junior-senior high school organization are: that it provides for the most efficient use of staff, chiefly of specialists in art, music, physical education, French; that it provides for the most efficient use of the school plant, especially gymnasias, auditoria, science laboratories; that it provides a stronger stimulus for junior high school students to continue their education into high school; that it provides better articulation between the junior and senior high schools; and that it provides greater security for junior high school students when they are associated with the more mature students of high school age. The values of both types of organization merit study by the Royal Commission on Education.

The curriculum of the junior high school includes, and the Alberta Teachers' Association believes should include, a basic core of language, social studies, mathematics, science, health and physical education. The program, too, includes an emphasis on personal development and guidance. It is supplemented by such cultural courses as literature on a compulsory basis, music, art and drama on an optional basis; and by such exploratory subjects as home economics, industrial arts, typewriting and agriculture. In theory there is a wide range of optional subjects available to junior high school pupils. In practice many schools have limited their offerings of optional subjects so much that the wide range of interests of junior high school students are not being met and the exploratory function of these options is not being satisfied.

There is a welcome tendency in the junior high school to make the transition from grade 6 to grade 10 easier by a more gradual use of departmentalization. That is, students in grade 7 receive most of their instruction from two or three teachers, those in grade 8 receive theirs from more teachers and those in grade 9 have most of their work from specialists in each of the subjects carried.

The grade 9 examinations provide a measure of achievement at the end of the junior high school. They also provide a means of guidance for students planning their future educational or life programs.

RECOMMENDATIONS

46. The organization of the junior high school should be studied with a view to determining whether its best work is done as an independent unit, as an upward extension of the elementary school, or in association with the high school.
47. A study should be made of the curriculum of the junior high school to determine its adequacy to meet the wide range of individual differences in capacity and interest among its students.
48. School systems, through principals and guidance services, should use the results of the grade 9 examinations in guiding students along educational and vocational paths most suited to their abilities, interests, and needs.

3. The Senior High School

Because the Alberta Teachers' Association is committed to the goal of twelve years of schooling for all children who can profit from formal education, it believes that the curriculum must be sufficiently flexible that every child can be taken at his present level of competence and achievement and have his capacities developed to as great an extent as possible within the limits of the time and resources at the disposal of good teachers. Boys and girls inevitably enter the senior high school with a wide range of abilities and achievement. It is the function of the high school to provide through its organization and curriculum just as fruitful educational opportunities as possible for each youth admitted. The varied functions of the high school are, therefore, to provide: (1) a general education suited to the needs of society and to pupils with a wide range of abilities, needs, and interests; (2) exploratory and pre-vocational experiences, especially in business education, home economics, agriculture, and industrial arts; (3) some basis of appreciation in such cultural areas as literature, music, art, and drama; (4) the academic foundation on which students may build college and university programs.

To perform its functions well, the high school may have to experiment with streaming based on ability and interest grouping, with honour classes for the gifted, and with differentiated curricular offerings more extensive than those now possible. Such experiments should take due cognizance of research findings. While believing in the value to society of a high school education for all who can profit from it, the Alberta Teachers' Association sees nothing undemocratic in guiding pupils into classes from which they will profit most. Indeed, it is the very essence of democracy that the individual should have his particular talents respected and developed. At the same time, the Alberta Teachers' Association would like to see the social values of public education maintained, if possible, through differentiated programs within the high school unit. The Association understands that this is possible within the presently existing authority of local school units, but that only limited advantage has been taken of this authority.

In the same way, the high school should experiment with curricular offerings best suited to meet its functions, and should evaluate these carefully in the light of goals and expected outcomes. Some effort has been made in this direction by providing alternative routes to the High School Diploma through a generous provision of academic, vocational, and general options. The Association is convinced that the adequacy of the curriculum should be examined on the basis of the aims of education determined as suggested in Chapter 2 of this brief, and of the demands of modern society as analyzed in Chapter 3. For example, the adequacy of the high school mathematics program should be examined in the light of the changes that have taken place in this science and of the emphasis being placed on the so-called 'modern' mathematics by exponents of the subject. The Association believes that the curriculum should be under constant revision by competent groups which include teachers. The Association believes, too,

that greater freedom in planning the programs of individual pupils might be left with principals, teachers, and guidance counsellors.

RECOMMENDATION

49. Any evaluation of the high school curriculum should be made only after a study of and statement of the function of the high school in Alberta society have been completed.

THE EFFICIENCY OF TEACHING

Teaching is both a science and an art. Besides having a broad and exact knowledge of the subjects to be taught, the successful teacher must know a great deal about children, about learning, about a wide variety of pedagogical procedures, about evaluation. It is not enough for the good teacher to be a technician applying a few rule-of-the-thumb methods. That is why the Alberta Teachers' Association places such stress on the importance of the teacher as a carefully selected, well educated, highly prepared member of his profession. The professional teacher will not be restricted by a procedure. He will be master of a variety of procedures and will know when and where to apply them most effectively. No centralized educational authority need dictate a specific method of teaching for use by a professionally prepared teacher. He must be free to choose the pedagogical procedure best suited to the topic, the class, and himself. With a well-prepared teaching profession, curriculum guides could and should be stripped of discussions about methodology.

It is difficult, and indeed unwise, to generalize about the efficiency of teaching when there is such variation in the teaching force. Certainly one cannot expect the highest level of achievement until teachers all reach a high level of professional and academic competence. One is surprised that the situation is as good as it is reported in the *Fifty-second Annual Report of the Department of Education of the Province of Alberta, 1957*. (pages 31-35 and pages 42-43). Yet even here, the importance of the individual teacher is apparent:

1. They (the superintendents) are also of the opinion that the effectiveness of the program in any one school is directly proportional to the ability and efficiency of the teacher. (p. 31).
2. In the large urban schools and the large centralized rural high schools the teaching staffs consist mainly of well-trained teachers of long experience who have become specialists in their fields of instruction. Naturally the teaching results achieved by these teachers are, on the whole, quite commendable. In the smaller schools, especially the non-standard-instruction time schools, the teaching results have been quite disappointing. . . . One reason for this is that the small schools have difficulty in retaining good teachers; hence stabilized instruction in them is becoming quite rare. (p. 42).

It would be useful indeed were the Royal Commission able to compare the effectiveness of the teaching force today with that say in 1928, 1938,

1948; to evaluate selection and preparation as factors in teaching effectiveness; to determine the relationship between high educational standards of teacher preparation and both educational outcomes and teacher retention.

The Alberta Teachers' Association believes that pedagogical procedures must be evaluated in terms of the educational goals desired, of their applicability to particular curricular material in a particular school situation, and of their suitability to the particular teacher and his class. There is a place in teaching for a variety of methods: the lecture, the discussion, the lecture-discussion, the problem-solving approach, the laboratory and field experience approach. The professional teacher will know when any one or a combination of these best fits the purpose of the learning situation. There is a substantial body of research on the merits of particular pedagogical procedures. This research was reviewed in the March, 1958, issue of *Phi Delta Kappan*, on pages 249-267.

All approved methods of teaching are to be found in use in Alberta schools. Probably the most misunderstood area of the elementary school program is the so-called **enterprise**. The enterprise, an unfortunate choice of a word in the opinion of the Alberta Teachers' Association, is really neither a subject nor a teaching method. It is rather a means of organizing curricular experiences that have a history, geography, science, or similar base, and correlating with these additional experiences in language, art, music, drama, mathematics. The emphasis is on the problem-solving situations related to a unifying experience. Within the so-called enterprise, if well organized, there will be opportunity for a variety of pedagogical procedures: certainly some direct teaching, some group activity, some directed study and reading, some problem solving. In evaluating the enterprise as a means of curriculum organization, one must be careful not to assume that he is evaluating the many pedagogical procedures used in relation to it. While the Alberta Teachers' Association believes that the enterprise as a basis of curriculum organization ought to be examined objectively by the Royal Commission, it believes that this should be done in light of the objectives set for it.

In the same way, the Alberta Teachers' Association believes that pedagogical procedures should be evaluated always in relation to the outcomes achieved. If these outcomes are not the ones which society deems desirable, then these aims might be altered by the means suggested in Part II of this brief. The appropriate change in procedures would follow, if necessary, the change of aims.

RECOMMENDATIONS

50. Studies should be made of the professional preparation of the teaching force in 1928, 1938, 1948 and 1958 as a basis for determining trends.
51. Studies should be made of the relationship of teacher education and experience to success in teaching in specific areas of the school or-

ganization (elementary, junior high, and high school) and in teaching particular subjects (mathematics, English, French, and so on).

52. The various pedagogical procedures which can be used in the classroom should be evaluated in terms of the purposes which they are intended to serve.

ORGANIZATION, ADMINISTRATION AND SUPERVISION OF INSTRUCTION

1. Organization of the Alberta School System

The Alberta School System is divided into four divisions: Division I consisting of Grades I, II, and III; Division II of Grades IV, V, and VI; Division III of Grades VII, VIII and IX and Division IV of Grades X, XI, and XII. Divisions I and II constitute the elementary school, Division III the junior high school and Division IV the senior high school.

This 3-3-3-3 system replaced the 8-4 system in which the first eight grades comprised the elementary or public school and the four upper grades, nine to twelve inclusive, the high school. The 3-3-3-3 arrangement, which has been in effect in Alberta for more than twenty years, has proven to be satisfactory. Upon the adoption of this plan it was decided to have external departmental examinations at the end of Grade IX and Grade XII. Prior to that, external departmental examinations had been given in Grades VIII to XII inclusive. *The School Act* requires pupils to attend school until they have attained the full age of fifteen years. Most pupils reach Grade IX in their fifteenth year. If they pass the Grade IX Departmental Examination, pupils planning to leave school at fifteen years of age are able to obtain a diploma certifying to having attained Grade IX standing. The desire to obtain a Grade IX diploma is an incentive for pupils to remain in school one year longer than was the common practice under the former 8-4 system.

The 3-3-3-3 system has other features that recommend it over the 8-4 plan. In Grades I to III it permits grade-grouping for instruction purposes. This is a very valuable arrangement in multi-grade classrooms. Moreover, it facilitates the implementation of promotion policies which take cognizance of individual pupil differences. In the junior high schools, especially the smaller ones, it permits grouping of pupils for instruction in the optional or elective subjects.

Since promotion in the senior high school is on an individual course basis, grade grouping at this organizational level has no special significance. With the establishment of the junior college it now becomes possible for certain communities to extend secondary education by one more year for the benefit of those who do not wish to proceed to university or for those who wish to take primary university courses in the home community.

2. Problems in School Administration

As related to instruction the term "administration" as here used has reference to the work performed by school boards and their executives in

providing classroom facilities, maintaining property, providing instructional materials and equipment, obtaining of teachers, and attending to operational business details that are essential to create proper teaching and learning conditions. In contrast the term "supervision" as here used has reference to activities of educational personnel who have for their primary aim the improvement of instruction.

The conduct of business operations of school boards is subject to scrutiny and regulation by the School Administration Branch of the Department of Education. From time to time, frequently at the request of school boards, the Department of Education has made administration surveys of local or divisional school systems. These surveys have revealed considerable lack of uniformity in administrative practices, especially in the provision of classroom facilities and instructional equipment and materials. A manual prepared by the Department of Education setting forth minimal specifications as to classroom accommodation, instructional equipment, and materials for offering a basic school program would prove invaluable to school board members and school administration officials.

There are some areas of administration where teacher participation is highly desirable; there are other areas where, both from the standpoint of the teacher and the board, teachers should be free of responsibility. The following will serve to illustrate desirable and undesirable teacher participation in administration:

1. When building a new building or classroom, or when selecting instructional equipment or materials, consultation with teachers in making building plans or in selecting equipment or materials would be decidedly advantageous to the board and would be a means of creating good board-teacher relations. This should result in providing the best possible conditions for giving instruction.
2. Where it is necessary for teachers to administer a text-book rental plan, the administration of the plan should be streamlined to the point of making minimum demands upon teacher time. Further, there should be no financial responsibility placed on the teacher.
3. Administration of projects such as pupil insurance should not be required of the teaching staff. If administration of this kind is done during school hours, not only is the board depriving the pupils of valuable instruction, but it is paying dearly in terms of money for services that could be rendered as effectively and much less expensively by competent clerical help. In this connection many school boards follow the commendable practice of making available secretarial assistance to principals which frees them and their teachers from time-consuming administrative clerical work.

3. Problems and Trends in Supervision of Instruction

In recent years there has been ever-increasing emphasis placed upon supervision as a means of improving instruction. Why should this be? The following indicate a few factors responsible for this trend:

1. The shortage of teachers has necessitated staffing some schools with partially trained teachers.
2. The content of courses, particularly in science and social studies, has changed so materially that it is necessary to provide means for keeping teachers and parents informed with respect to changes.
3. Centralizations have created large schools with special administrative and instructional problems.
4. A pressing problem in all schools is how best to help children who by reason of absence from school have become handicapped in one or more of their studies. Designating someone as a helping teacher to deal with this special problem, or making it the special responsibility of one of the supervising persons such as the vice-principal, may be the means of solving the problem.
5. Changes in teaching methodology, such as in enterprise and unit study procedures, have necessitated in-service programs and individual reorientation of teachers in the field.
6. Forward-looking teachers and supervisors realize the importance of keeping abreast of the latest thinking in all spheres of learning. In certain subjects, for example in mathematics, there are intimations that radical changes in content and methodology will be introduced in the near future.
7. The larger schools have made teachers more conscious of individual differences among pupils. This has resulted in the use of group methods of providing help both for under-achievers and of providing enrichment for gifted children.

The C.E.A.—Kellogg courses in Education Leadership and the Leadership Course for Principals growing out of the C.E.A.—Kellogg Project have served to make school boards aware of the need for increased and improved supervision. As a consequence, there has been an increase in supervisory personnel and in the time made available to them to perform their supervisory duties more effectively.

The following is a category list of supervisors found in the typical large city system: superintendent, assistant-superintendent, divisional head, subject supervisor, principal, assistant-principal, department head or subject coordinator, helping teacher.

In smaller urban systems and rural school divisions there are fewer supervisory posts. A typical rural division would have: a superintendent and possibly an assistant superintendent, one helping teacher, principals, and assistant-principals.

There is need, in this transition stage, to establish as clearly as possible, the role of supervisory personnel in order to derive maximum benefits from their services. The roles of the various supervisors are determined in large measure by local circumstances. Through study and discussion, general concepts of what these roles should be are gradually emerging.

In an address to the Annual Conference of Alberta School Superintendents and High School Inspectors, the Chief Superintendent of Schools dealt with the need for clarifying the role of the superintendent. In this paper, the Chief Superintendent reviewed recent developments in school administration enumerating certain principles of administration that have become generally accepted. Using these as a basis, he suggested certain board-superintendent relationships which, if accepted as valid, would aid in clarifying the role of the superintendent.

Certainly the functions of the superintendent have changed with the educational system. In pioneer days government direction and supervision were necessary in order to keep in operation a system dominated by one-room rural schools, and to ensure that at least minimum educational services were being provided throughout the province. To carry out these purposes school inspectors were appointed by, and made directly responsible to the Department of Education.

Today large centralizations are fast replacing the one-room school. Competent and experienced school boards are providing improved administration in larger administrative units. In the schools themselves there is found a growing number of capable and educated administrative personnel. But the role of the government-appointed superintendent is increasingly difficult to define. He remains a government-approved adviser to an elected school board to which he is not directly responsible. As a civil-servant, his civil and educational freedom is restricted by the policies of the Department which he services.

In contrast to present practice in rural Alberta is that which is followed generally in the United States and in the larger cities of Alberta where locally-appointed superintendents provide administrative and supervisory leadership. Such superintendents work closely with school boards, principals and teachers, and with more direct concern for education at the local level.

In giving supervisory assistance numerous devices and procedures are employed. The following serve to illustrate:

1. Bulletins
2. Teachers' meetings
3. Institutes
4. Inter-visitation of teachers
5. Co-operative and group supervision (For a detailed description see the Fifty-second Annual Report of the Department of Education of the Province of Alberta, 1957, pp. 35-37)
6. Co-operative research or study projects such as the Five School Study (See Fifty-second Annual Report of the Department of Education of the Province of Alberta, p. 41)
7. Supervisory visits by the provincially-appointed superintendents of schools and high school inspectors.

It is recognized that in the cities there is adequate personnel available for implementing satisfactory supervision programs. In the smaller urban school districts and in the rural school divisions there is need for more supervisory help.

RECOMMENDATIONS

53. The present 3-3-3-3 grade organization should be retained in the Alberta School System.
54. A brochure or manual should be prepared under leadership of the Department of Education to give guidance to school boards with respect to good school administration practices, and outline the areas of administration in which teachers may well be involved for the general benefit of education.
55. Enquiries should be made into the merits and demerits of properly qualified superintendents being employed by and responsible to local school boards.
56. The school boards in the smaller urban districts and in the rural school divisions and the Department of Education should be asked to increase the supervisory staff in accordance with need.

SCHOOL TEXTBOOKS

Supplementary memorandum number one considers this topic at length. It is pointed out there that when badly used, the text becomes the sole source of material which is assigned for memorization and examination. Textbooks seldom present all information, or all points of view on controversial subjects. They become out-of-date, and are not readily adapted to dealing with individual differences in achievement. Too much reliance on the textbook prevents inquiry, the search for information, and the growing awareness by the child that no one source contains the whole truth.

On the other hand, the teacher with inadequate education is lost without a textbook. A well-organized and well-presented text can contain the most valuable information on a topic. In the absence of school libraries, textbooks are particularly essential.

RECOMMENDATIONS

57. Textbooks which contain the essentials of each subject should be made available.
58. Alberta has reached the stage in its development where textbooks should reflect our culture.
59. More attention should be given to Commonwealth books.
60. The adequate supply of reference books in every school should be a major consideration of school boards.

SCHOOL LIBRARY SERVICES

Supplementary memorandum number two deals with this matter. It points out that the modern curriculum requires a good school library, and large schools warrant the required expenditure. Proper school libraries are rare in Alberta, and school librarians even more so. It appears that educational authorities show little concern about school libraries. At a time when many large new schools are being built, this is a serious matter.

RECOMMENDATIONS

61. The Department of Education should authorize and encourage the use of a uniform book classification for the assistance of school libraries throughout the Province.
62. In elementary schools of over 200 pupils, and in all high schools, adequate central library facilities should be required in all new schools. This space, without "study purposes" limitations, should qualify for at least the standard classroom grant.
63. Up-to-date information regarding central school library requirements and facilities should be issued to school boards for their guidance. The Faculty of Education should keep the need for school librarians under constant review so that school library courses may be offered as required.
64. Books listed in the catalogues of The School Book Branch should be classified for the use of school librarians.
65. Additional Government Grants should be paid to accredited school libraries which have met basic standards.

AUDIO VISUAL AIDS TO TEACHING

Supplementary memorandum number three presents data on audio-visual aids to teaching. Research shows that films aid in the understanding of factual material, in retention of material learned, in the perception of relationships, in training the ability to think, in stimulating imagination, and in increasing the variety of pupil interests. The Department of Education in Alberta has an extensive film and filmstrip library available to schools in the province. In 1956-57 there was a circulation of 35,743 sixteen-millimeter films. A quota system of circulation was established in 1953. This has restricted the usefulness of the service.

The classroom use of radio is most effective for the fine arts subjects where specialized instruction is desirable; or for the dramatization of stories from history where the information is not available to the teacher. Alberta is served by two series of school broadcasts: one in co-operation with the CBC, the other over CKUA. Approximately two-thirds of the

elementary and junior high school classrooms in Alberta are equipped to receive the broadcasts. It is estimated that some programs like *Sing and Play* may reach 60-70 per cent of the children in Division I. School broadcasts have proven particularly effective in music and in speech instruction. Restricted reception is the major limitation of school broadcasts.

Television as an adjunct to teaching is still being explored. It is too soon to assess the advantages and disadvantages of this medium. Further experimentation is necessary.

RECOMMENDATIONS

66. Instruction in the use of audio-visual materials should be available to teachers as part of their pre-service professional preparation, and should be strengthened and kept up-to-date through continuous in-service education.
67. Steps should be taken to ascertain whether or not the present quota system is unduly restricting the legitimate use of films as classroom teaching aids. If such is found to be the case, then consideration should be given to the provision of more films.
68. There should be established in Alberta an adequately powered educational station to serve as the primary, and perhaps, only outlet for educational broadcasts of all types.
69. There should be further study and experimentation with respect to the classroom use of television before this medium is introduced in any large scale in Alberta schools.

CHAPTER 7

PUPIL PROGRESS

OPTIMAL AGE OF SCHOOL ENTRANCE

Supplementary memorandum number four presents the factors which should determine the optimal age of school entrance and a summary of practices in other countries. The fundamental problem is the extent and variety of individual differences in school beginners. The ordinary classroom with some thirty beginning grade one pupils will include marked variation in such factors as mental age, physical vigor, muscular co-ordination, visual control, emotional stability, and social development. Relating the curriculum to readiness to learn presents considerable difficulty. Pre-school training of the kindergarten variety, and reading-readiness training, both increase reading-readiness when other developmental factors are favourable.

The essence of any solution to the problem of optimal age of school entrance is differential treatment of children of varying degrees of readiness. Thus, some children are ready for entrance into grade one at five years of age, and others are less ready at seven. In many school systems this problem is partially met by the existence of kindergarten facilities in which children are given the type of developmental experience most appropriate. Thus, some receive reading-readiness training while others are experiencing the ordinary activities of the kindergarten. This process prepares them for reading activities in grade one as well as ranking them in order of readiness.

RECOMMENDATIONS

70. School systems should add pre-primary rooms to the elementary school with the dual roles of giving basic kindergarten training to those who are less ready for formal reading, and a readiness program for the children who are ready for it. Children in an advanced state of readiness should be considered for promotion to grade one at once; in some systems promotion to grade one in January might be arranged; but for those least ready, a full year of kindergarten skills and readiness skills would be provided.
71. The Faculty of Education should be requested to provide a special program covering course work, observation, practice teaching, and tests and measurements in order to prepare teachers who have marked professional competence in kindergarten and pre-primary work, and with a broad insight into the work of the primary grades.
72. Regardless of the presence or absence of pre-primary rooms, school systems should encourage grouping within the classroom in grade

one and subsequent grades in order to adjust the level of instruction to the readiness of pupils.

73. School systems should reduce the size of classes in grade one and subsequent grades wherever possible in order to permit more individualized instruction.

ACCELERATION AND RETARDATION OF PUPILS

1. Differences in Achievement

The extension of education to all our children results in the adoption of the grade system which is based on the uncertain assumption that all children of a given age are equal in physical, mental, emotional and experiential background, and capable of working profitably at the same curricular tasks. The grade system is administratively attractive. It places the child in the first grade, and moves him forward year by year through the curriculum of each grade level, until, having reached the end of the program, he is finally graduated from school.

Unfortunately for the theory, our research on individual differences have revealed that children are not alike. Dunlop, Hunka, and Zingle in "Individual Differences in Alberta Schools," *Alberta Journal of Educational Research*, Vol. 1, No. 4, December, 1955, report that in any one grade, range in achievement in Alberta schools may extend to eight grades, and range in I.Q. may reach 80 points. Even when individual classrooms were studied it was found that the average spread of intelligence was 50 I.Q. points, and that the spread of achievement in reading, arithmetic and language was over five grades. Spreads of intelligence and achievement of this size are found everywhere at the grade six, seven and eight levels. The ranges are smaller in the lower grades and tend to be higher in high school. Besides spreads in intelligence and achievement, there are differences in physical health, social development, experience and adjustment, all of which further affect the homogeneity of a classroom. The problem is, how are we to cope with these huge spreads of ability, achievement, motivation, and adjustment in the individual classroom in our effort to achieve the optimal learning situation?

Three solutions of the problem have developed in the schools of the English-speaking world:

1. To place major emphasis on rigid academic standards and little emphasis on the welfare of the individual
2. To place moderate emphasis on academic progress with considerable concern for the personal growth of the pupil
3. To place major emphasis on the development of the pupil with little concern for academic standards.

2. Retardation as a Method of Dealing with Differences in Achievement

Placing major emphasis on rigid academic standards will result in the failing of pupils, with the result that they become "hold overs" and

repeat their grades. S.C.T. Clarke in "Promotion Practices and Policies in Alberta Schools," *The Alberta Journal of Educational Research*, Vol. 1, No. 4, December, 1955, reports that in Alberta in 1954, of all the children between grade one and grade eight inclusive 5.4 per cent failed, with the highest failure rate, 6.5 per cent in grade one. In addition, 5.1 per cent were provisionally promoted, of which 14.87 per cent were subsequently failed. This suggests a final figure of 6.2 per cent of all pupils failing their year, which means that if no pupil failed more than once, over 50 per cent of the pupils fail in at least one grade from entrance into grade one to completion of grade eight.

In contrast, in 1954, the per cent of all pupils accelerated was .42 for academic reasons, with another .41 per cent accelerated by reason of age and social adjustment. This makes a total of .83 per cent accelerated. In other words, for every one child accelerated seven were retarded.

The *Promotion Policies Report*, Department of Education, Province of Alberta (p. 41) suggests that opinion on acceleration and retardation varies. It involves a general movement away from major emphasis on rigid academic standards towards a more middle-of-the-road policy. Definite reactions are quoted such as the following from Nova Scotia:

The results of the provincial examination of the past ten years show that approximately fifty per cent of the students writing the Grade XI provincial examinations fail to make the necessary pass standard. The Grade XI class, in any year, represents about one-fourth of the students in a typical elementary grade. Thus, only about one-eighth of the normal enrolment in an elementary grade survives to the end of Grade XI by meeting the pass standard for that grade. If public secondary education has any responsibility for the seven-eighths of the school population who do not complete high school successfully, the present curriculum and the present examination system must be revised so that adequate and satisfactory educational facilities may be provided for all children.

Monroe's *Encyclopedia of Educational Research* in an article by M. R. Sumption and T. A. Phillips, "School Progress," sums up the thirty years of research on retardation as follows:

1. It does not significantly increase a slow rate of learning.
2. It does not make for better pupil morale.
3. It does not assure mastery of subject matter.
4. It does not reduce variability or achievement in individual classes.
5. It does not increase grade achievement averages.
6. It does not improve the personality adjustment of the retarded.

W. W. Cook, in "Individual Differences and Curriculum Practice," *Journal of Education Psychology*, 39: 141-8, 1947, expresses the opinion

that the fact of promotion or retardation was less important than whether the pupils' needs were being properly met. So far one might say the emphasis has been on the effects of retardation of the poor achiever. What of those who are promoted? John Goodlad in "Research and Theory Regarding Promotion and Non-Promotion," *Elementary School Journal* 53, 150-55, 1952, reported on unsuccessful grade one pupils in twelve schools. In half the schools the failures were forced to repeat the grade. In the other half, they were promoted under a no-failure policy. He found that, in the next year, both the groups continued to have trouble with their school work, both were maladjusted, and both had poor social acceptance and little self-confidence.

Cronbach reasons that since non-promotion brands the pupil with failure and upsets whatever social adjustment he has, holding a child back rarely has a net advantage. On the other hand, if the child is to remain with his group he will have extreme difficulty working under conditions of inferiority and failure.

The tendency on this continent is to reduce failures by limiting them to pupils whose capacity, physical, social, and emotional development permit them to repeat a grade without too great a sense of frustration. For the others, the problem is to see that their needs are met in the classroom in which they are placed. Individual differences are so extensive and varied that homogeneity in achievement in all subjects is an impossible ideal. The able teacher expects a wide spread of achievement and is trained to section his class in such a way as to permit effective work to be done by the average and superior children, while ministering to the group and individual needs of the slow learners at their levels of performance.

3. Acceleration as a Method of Dealing with Differences in Achievement

Acceleration as a means of dealing with differences in school achievement is considered at greater length in Chapter 8 under provisions of the gifted child. A brief resumé of the topic is included here.

Acceleration means the advancement of a superior child at a more rapid pace than the grade a year usually sanctioned by the grade system. Sometimes it is achieved by a double promotion involving grade skipping. Preferably, the double promotion involves taking three years of work in two years with planned coverage of the work of the three grades.

Acceleration presents certain administrative difficulties. For the pupils concerned, in order to avoid grade skipping, special instruction must be planned within the classroom of an already busy teacher. As a result the frequency of acceleration is greatly reduced. As already noted, in Alberta .83 per cent of children are accelerated annually, with a ratio of seven retarded for each one accelerated.

Acceleration must be practised with caution. Basically its success depends on the child's ultimate educational welfare which must be in terms of mental age, physical development, and social and emotional adjustment,

and very definitely must be related to a child's background of experience. Promotion, then, is desirable where the child is developmentally advanced as well as superior in intelligence and achievement. Most authorities favour moderate acceleration when the individual is socially and physically mature for his age, especially when there are no enrichment opportunities for the gifted child.

The modern viewpoint sanctions orderly and planned acceleration of one or even two years in the child's school career, when physical and social maturation are present. These latter factors, along with the technical difficulty of handling acceleration without grade skipping, necessarily reduce the amount of acceleration.

Superiority sometimes is recognized by segregating the child, wholly or partially, in special classes or groups where a more challenging and enriched program is made available, with or without acceleration. Alternatively, the child may be placed in the upper group of the ordinary classroom and singled out for enriched educational experience.

The Alberta Teachers' Association believes that retardation has proven to be generally unprofitable except in the case of a child who is mentally, physically, and socially immature. In considering present practice in Alberta schools, the Association feels that a severe system of selectivity has been at work, and far from being too lenient, it might be criticized on the grounds that it is too ruthless. The overall evidence is that there is a substantial rate of failure and retardation taking place. Schools are far from achieving their potential student output. Rather than increase the already high rate of attrition, the Association would prefer to see studies initiated to increase the number of graduates from Alberta schools.

RECOMMENDATIONS

- 74. Differences in student achievement should be dealt with by measures such as small classes, grouping, remedial work, individualized instruction, and moderate acceleration rather than by widespread failing of low achievers.**
- 75. Other factors such as physical, mental, emotional, and social development should be considered along with school achievement in determining acceleration or retardation.**
- 76. Administrative convenience, as when a high failure rate evens out the enrolment in rooms, should never be allowed to determine the acceleration and retardation of pupils.**

ACHIEVEMENT NORMS

Standardized tests, as their name implies, enable educators to determine standards. This is useful for comparisons from time to time, and from place to place. The fundamental weakness of all standardized tests

is that they assume a uniform curriculum. Their norms compare the achievement of this pupil in a given curriculum, with a large group of other pupils, who may or may not have had an equivalent curriculum. It is well known that performances of large groups may change over a period of years, so the task of renormalizing is constantly present.

1. Use of Existing Standardized Tests

Today there are many tests in existence which are suitable to use in Alberta schools. They have been developed by excellent workers with the requisite tryouts and attention to norms. The best and most useful are in those subjects in which there is a normal gradient of difficulty, where the content is almost universal and least subject to variations of curricula: reading, language, arithmetic and spelling. Standardized tests are less satisfactory in science, social studies and literature, where variations in curriculum render them less useful in some areas than others. In the best tests there is a true continuum of difficulty, even in these subjects. However, their value is lessened by the fact that curriculum content varies so widely from province to province and state to state.

It is suggested that we may utilize the best of existing tests in arithmetic, reading, language and spelling in the elementary and junior high schools. In the senior high schools tests of reading and language are suitable for use. We can also use, with diminishing profit, tests in the areas of mathematics, social studies, science and literature, if they test the concepts which should emerge from study of these subjects. They will never be completely adequate, since they are not constructed to cover the content of the Alberta curriculum.

Test norms are commonly of the age, grade, percentile, or standard score variety. The question at issue is whether norms, based on a population sample in the United States or Ontario, are adequate for Alberta children. Do Alberta children score, on the average, in conformity with the American or Ontario children? This is a difficult question to answer in an authoritative manner. Studies of the suitability of nationally known American tests suggest that their standards are frequently lower than performance in certain states and provinces. Research experience with American tests suggests that their norms are too low for Alberta children in grades one, two, three, and four, but that they become increasingly appropriate in the higher grades.

It is suggested that we use the best of the existing tests, but that we renormalize them for Alberta. This will make them more meaningful and useful for Alberta schools. We must never lose sight of the fact, however, that there is a danger that our norms may depart seriously from the norms of the test makers, or of other Canadian provinces. This matter must be under constant scrutiny by the proper authorities.

2. Alberta Development of Standardized Tests

The constructing and normalizing of educational tests is an expensive and time-consuming activity, and should only be undertaken when the

need is acute either because of the lack of suitable existing tests or the limited value of these tests. The problem may have two answers. For certain subject areas, such as algebra, geometry, trigonometry, physics, and chemistry, the tests may require minor revisions to which the publishers might assent for Alberta publication. In other subject areas, such as social studies, literature, and elementary and junior high school science, the curriculum in Alberta is so different from that in the various American states that entirely new tests seem indicated. Still another test category exists. In the field of language most of the existing tests limit their coverage to mechanical usage, thus yielding scores which do not begin to measure the quality of the written work of the child. Here there is new hope in the STEP tests which attempt a more global approach to language evaluation.

To summarize, we have two courses which we should follow: adapt good existing tests to Alberta conditions, with permission of the publishers, and develop completely new tests where no suitable ones exist.

The Alberta Teachers' Association is aware that standardized tests, in the absence of proper safeguards, can be misused to compare classes or schools, with implications about the efficiency of teaching. Differences in achievement may be attributable to many factors other than teaching efficiency. These include intelligence level, attitude of the community toward education, and the curricular emphasis of the particular teacher or school. The Association believes that professionally educated teachers will not misuse tests by teaching only the narrow competencies which can be measured by standardized tests. On the contrary, the professional teacher will use standardized tests for diagnosis, as a basis for remedial work, and in order to make broad judgments about a pupil or class.

RECOMMENDATIONS

77. A committee on evaluation should be established, including teachers and "tests and measures" personnel from the Faculty of Education, whose functions would be:
 - (a) to determine subjects where existing tests can be used;
 - (b) to determine subjects where existing tests, with modification, can be used;
 - (c) to determine subjects where new tests are required.
78. Each large school system should have on its staff an expert in tests and measurement to assist in the construction, normalization, use, and interpretation of tests.
79. Standardized tests should be used primarily as a basis for remedial work, and in making broad judgments about a pupil, class or school, keeping in mind that the objectives of the curriculum are broader than the objectives measured by available standardized tests.

THE RETENTION OF PUPILS IN SCHOOL

Nearly all pupils in Alberta elementary schools, and most pupils in junior high schools, are below the legal school-leaving age. The retention of pupils in school is therefore of primary concern at the secondary school level. The problem involved in retention is posed by the questions: What general level of education do we want of our young people? What proportion of youth do the people of Alberta want to complete a high school diploma? Should our secondary schools be very selective, including only a small proportion of the appropriate age group, or very inclusive, including most of the age group? Public policy on these questions will inevitably determine the nature of the secondary school curriculum, since what can be done for the majority of an age group differs markedly from what is possible for the select few. The Alberta Teachers' Association respectfully submits to the members of the Commission that recommendations about the secondary school curriculum will always contain seldom-stated assumptions about policy on retention.

1. Trends in the Holding Power of Alberta Schools

There is a definite trend towards increased retention of students in Alberta secondary schools. One factor which may be causing this trend is a change in public expectations: see the *Prospectus for a Study of Matriculation Requirements in the Province of Alberta*, 1956, mimeographed, page 2.

The normal education expectation for young people fifty years ago was a Grade VIII diploma, whereas today it is a high school diploma. In the past, those who continued in high school were the select few who were definitely preparing for university courses which led to the professions.

There is also a demand by employers for young people with a high school education. It is standard policy of "Career Event" speakers to urge students to stay on in school.

Evidence about the trend is found in the 1951 census data, on the per cent of persons in the 15 to 19 age group attending school. For Alberta, this figure was 50 per cent, as compared with 40 per cent for Canada as a whole. Alberta's retention was exceeded only by that of Saskatchewan and British Columbia.

TRENDS IN ALBERTA HOLDING POWER

	1936-37	1955-56
Percentage of Grade IX to beginners 9 years previously	40	88
Percentage of Grade X to beginners 10 years previously	30	67
Percentage of Grade XI to beginners 11 years previously	22	53
Percentage of Grade XII to beginners 12 years previously	15	43

(Adapted from Alberta Brief to Gordon Royal Commission, 1955)

TRENDS IN PERCENTAGE OF ALBERTA SCHOOL CHILDREN IN HIGH SCHOOL

Year	Per cent
1912	3.92
1922-23	8.29
1932-33	17.13
1942-43	18.98
1952-53	18.88
1955-56	19.50

(Table 20, Department of Education 51st Annual Report, 1956, page 142.)

These figures show a trend toward increased retention. They fail to give any indication of the actual rate of retention at the various school levels. A series of cross sections give some indication of drop-out rate. The imperfection of such figures is that immigration, emigration, and deaths may distort the picture.

HOLDING POWER OF ALBERTA SCHOOLS

(Data compiled from Department of Education Annual Reports, and from Alberta Matriculation Study Reports.)

Description	Number	Percent of beginners
June, 1939, beginners in Grade I	21,575	100
June, 1948, nine years later, in Grade IX	11,299	52
Sept. 1951, 12 years after Grade I, High School Diplomas issued	2,871	13
University matriculants (7 subjects)	978	
Sept. 1951, entered University of Alberta in a degree program from the 1951 matriculants	640	3
Sept. 1952, entered second year University	519	
Sept. 1953, entered third year University	416	
In 1955, number with degrees	285	} 2
In 1955, number in programs leading to a degree	149	
Sept. 1943, started Grade I	18,495	100
June, 1952, in Grade IX	12,288	66
Sept. 1952 in Grade X	9,637	52
June, 1955, High School Diplomas	3,867	21
June, 1955, Matriculants	1,426	7.7
Sept. 1955, Entered University from among 1955 matriculants	684	3.7

These data on holding power show that the Alberta secondary schools have a very high rate of attrition. Comparisons with other provinces and with the United States of America show that of 1,000 students in Alberta in grade five, 350 continue to the end of high school. The corresponding Canadian figure is 182, but the figure for the United States is 453.

2. The Relationship Between the Curriculum and Retention

There is a great variation in the ability to do academic type high school work. Increased retention will make this variability greater.

STUDY OF SAMPLE OF GRADE IX CLASS OF 1950, MADE IN 1954 (Unpublished)

High School diploma	I.Q. 68-96 N=250	I.Q. 97-105 N=291	I.Q. 106-114 N=259	I.Q. 115-143 N=215	Totals N=1015
Without matriculation	10	38	61	67	176
With matriculation	2	4	27	70	103
Totals	12	42	88	137	279

It should be noted that:

1. 103 out of 1015 secured matriculation (approximately 1 in 10)
2. 736 out of 1015 do not secure a H.S.D. (approximately 7 in 10)
3. 54 out of 541 in the bottom two quartiles of intelligence obtain a high school diploma (approximately 1 in 10)
4. 6 out of 541 in the bottom two quartiles of intelligence obtain matriculation (approximately 1 in 100).

These data clearly show that of the Grade IX students, approximately half have little chance of getting a high school diploma. One explanation of this is that they lack the intelligence to do academic type high school work as it is offered in the high schools of Alberta. Careful studies comparing the holding power of large composite high schools with varied programs with the holding power of small high schools with largely academic programs would throw light on this matter.

These data also clearly show that of the top quarter in intelligence, 137 of 215 secure a high school diploma and only 70 of these secure matriculation. This is a recognized waste of talent. Again, the above-mentioned studies would indicate the location of the greatest loss.

Only fragmentary data are at hand to indicate the increase in average I.Q. by grade. It is estimated as follows: Grade IX, 106; Grade XII, 114; Grade XII matriculants 118; university entrants 120; university graduates 125. If there is such an increase it reflects the increasing ability required to master academic work as one goes up the grades. This means that if the high schools are to retain more students longer than at present, they must offer alternative courses as well as the more academic courses.

3. Causes of School Drop-Outs

This topic has been thoroughly reviewed in a thesis by Alberta E. Hohol, *A Review of the Evidence on the Problem of Why Youth Leave School*, unpublished M.Ed. thesis, Edmonton, University of Alberta, 1954, and reported in Vol. 1, No. 1, *The Alberta Journal of Educational Research*. March, 1955 in an article "Factors Associated with School Drop-Outs." Hohol suggests eight major factors:

1. Economic status or occupation of parent
2. Retardation and becoming overage
3. Intelligence

4. Sex
5. Home status
6. Personality
7. Participation in extracurricular activities
8. Pupil and parent attitude toward education.

Other factors associated with school drop-outs which are mentioned by Hohol are school attendance, boredom with the school program, frequent transfers from school to school, and specific achievement difficulties such as poor reading ability. Such factors seldom operate singly.

Administrative policy can affect retention. It appears that in some schools there is a "shake-down" policy by which the teachers and administrators make the low achiever so uncomfortable that at best he drops some subjects, and at worst he drops out of school. This practice undoubtedly improves the passing average of the school on the Departmental Examinations, but at the expense of the holding power of the school. This brief supports the view that it will benefit both the individual and society if schools make concerted efforts to increase their holding power.

RECOMMENDATIONS

80. A study should be made of the records currently available in the Department of Education tracing the retention of samples of Grade IX students through subsequent grades, paying particular attention to intelligence, urban-rural location of students, and type of high school attended, in order to use the more exact data thus obtained for better planning for retention.
81. A study should be made as above to determine the proportion of passes by intelligence for each grade level for each type of high school program as an aid to planning curriculum and to guiding students.
82. All schools, especially junior and senior high schools, should attempt to hold all students as long as they are profiting from public education. Efforts to hold only the bright students may not work because of strong social pressures from their age mates.
83. All schools, especially junior and senior high schools, should study their own drop-outs with reference to the factors which are associated with dropping out of school, and with a view to determining causes of drop-outs and initiating remedial action.
84. In order to encourage students to continue in school, each school system should be prepared to offer a variety of high school courses consistent with its resources.

85. In order to reveal "shake-down" practices which encourage students to drop subjects or to drop out of school, the evaluation of the per cent of students passing Departmental examinations should be in terms of the number who originally enrolled in these courses rather than in terms of the number who wrote the examinations.
86. Each school system should seek to improve the quality of instruction especially in the high schools. In-service education in Alberta affects high school teachers much less than it does elementary school teachers. It is obvious that first-rate instruction tends to retain students in school.

DEPARTMENTAL EXAMINATIONS

The departmental examinations of this province are administered to all students in grades nine and twelve. The grade nine examination marks the completion of the junior high school program and is designed to inform pupils, and, in the process, teachers and parents, of their suitability for advanced training, and provide guidance toward the type of secondary school program for which they seem fitted. The grade twelve examination qualifies some students for university entrance, and awards to a much wider group the high school diploma, evidence of satisfactory completion of three years of patterned secondary school courses.

The final examinations in Grade XII have been criticized for not doing an effective screening for university entrance. A subcommittee of the Joint Committee to Coordinate High School and University Curricula has been studying this matter since 1954. This matriculation Study Subcommittee, in a February, 1958, *Progress Report*, indicates that the Grade XII examinations are "the best single prediction of success at the University of Alberta." The report compares the College Entrance Examination Board tests with the Alberta Departmental Grade XII examinations and concludes that "there is no evidence that the C.E.E.B. tests should replace the Grade XII examinations for matriculation purposes." To date, the evidence seems to encourage definite confidence in the departmental examinations.

1. The Desirability of Adopting Existing Standardized Examinations

In certain American cities the College Board Examinations produced by the Educational Testing Service of Princeton, New Jersey, are used as the terminal examination for secondary school, and indeed as the matriculation standard for entrance into many famous universities. The attraction of the College Entrance Examination Board lies in the fact that the tests vary in content from year to year while maintaining a relatively stable standard. This is good. The main criticisms of the College Board Examinations are twofold. First, since they are designed for wide use, they do not follow any one curriculum. This is good, to the extent that it recognizes, identifies and tests learning outcomes of subjects as varied as mathematics, science and social studies. It is weak in that it does not

permit penetration into the precise curriculum and textbooks of a unit of instruction, and base the examination on carefully limited and specific bodies of content. Second, any widely used and standardized set of tests must inevitably conform to a formula in type of question and in form of answer required. Since the Educational Testing Service tests are highly objective, they are answered by check marks or recognition of response, rather than by extensive writing, and however skillfully constructed are limited in the range of response activity possible. This imposes on students and teachers preparing for such examinations a characteristic teaching and study procedure which is most effective in passing this type of examination, but not necessarily the most effective method of learning for later recall or use. Add to this the limitation already mentioned, the necessity of the College Board Examinations concentrating upon outcomes which are common to a variety of curricula, and the result may be a rather unsatisfactory evaluative procedure.

On the other hand there is an undeniable attraction in using a measuring instrument which has approximately the same standard year after year. It permits in any area of learning comparison of achievement now and years ago a property which is absent from our Alberta final examinations.

In summary let us say that the use of existing standardized examinations in grades nine and twelve presents the following attractive features:

1. A relatively absolute standard which permits valid comparisons of achievement from class to class, school to school, and from one year to another.
2. The examining of learning outcomes which are common to all curricula and which are frequently overlooked in a locally prepared examination.
3. Greater objectivity and reliability in scoring.

In criticism the following features should be kept in mind:

1. Such examinations have less curricular validity since they must be acceptable in many areas and conform to many curricula.
2. They cannot examine as intensively as if they were created to conform to a provincial curriculum.
3. They tend to circumscribe teaching and study since they repeat certain types of questions (especially the recognition-type objective item) which constrict the type of learning tested and compel teacher and student to adopt a restricted type of study.
4. Over a period of years examinations may determine curriculum content.

2. The Improvement of Departmental Examinations

The existing system of examination may be described as a relatively modern technique of examination based on the use of objective

items, semi-objective short essay-type questions, and longer essay-type questions. Every effort has been made to insure objectivity of scoring. The tests are closely based on the provincial curriculum. The examinations change fairly completely from year to year, although continuity of pattern is evident. They vary in difficulty necessarily, since an examination is never used twice, but the variations in rigor are adjusted by means of a transmutation scale which expresses the scores in five rigidly defined groups: H,A,B,C,D. They are apparently as efficient as certain standardized college entrance examinations, but with a much more cumbersome system, and with tremendous consumption of pupil and teacher time.

The province is not committed to the preservation of tradition. There is a willingness to change, if change is deemed wise. Hence it seems profitable to explore the improvement of our present examination system. The improvement of the system might be possible by reducing the length of some examinations, by improvement of the quality of the questions, and by developing equated examinations with continuity in standards.

The three hour examination in any subject is defensible only if it increases the validity of the test, and if the reliability of the testing is above reproach. It has been demonstrated times without number, that a shorter and more reliable test is often a more efficient instrument. To the degree that objective items and objectively scored short essay-type questions are employed in place of the traditional longer essay-type question, a test may be safely reduced in length. Alberta has already demonstrated its readiness to reduce sharply the use of longer essay-type questions, with increased use of the short essay-type and objective items. In fact there would be little resistance to the development of a ratio for literature, social studies, and language of **one** for objective, **two** for short essay-type questions, and **one** for the long essay-type. There would be little resistance to the total omission of the long essay-type in all other subjects. This would result in increased validity since more of each course would be examined, reliability of scoring, and a reduction in testing time. All of this could be achieved with increased testing efficiency.

The quality of the questions can be improved by the application of professional knowledge to the task. Every objective item should be subjected to item analysis on a randomly drawn sample using sound statistical procedures. A test pool of questions with known item efficiency and item difficulty could thus be produced.

Every short-answer essay-type question should be treated in the same way. Where a series of related short-answer essay-type questions are used, they should undergo item analysis as single items, and be returned to the short-answer pool. In a period of years the objective and short answer question pools would attain such dimensions that it would be possible to prepare a new examination according to a pattern of item difficulty which would tend to make for comparability from year to year.

Complete test security should be practised. A final examination should never remain in the hands of pupils, nor be made available to them for study.

A small section in the Examination Branch of the Department of Education might prepare and evaluate items and maintain the test pools. To get the pools started it might be wise to utilize item tryouts on representative samples, as a supplement to the final examination. Committees of teachers might well work on the development of the pool of items.

The short-answer essay-type question should be made specific in two ways. First they should be so limited in the answer required that a completely objective system of scoring could be employed. Second, each should test a known mental process such as recall, organization, definition or exposition, comparison and contrast, description, chronological sequence, cause and result, instruction, generalization, deduction, application, evaluation, appreciation, use of scientific method.

The traditional long essay-type question still has its unique value, especially in composition, literature and social studies. One would hope that it would only be used for purposes which cannot be better served by the other and more objectively scored types of examinations. Hence, its use should be limited, even in these three areas. It may legitimately be used only on **unitary** problems involving some combination of recall, organization, evaluation, interpretation or generalization. Allow this type of question to remain in the three subject-matter areas but note above the ratio of **one** in **four**. When used the questions must be specific, and scorable by means of pre-planned answer keys. Statistical analysis will determine whether their retention is justified.

3. Equated Examinations and Continuity in Standards

The great weakness of the traditional examination paper lies in the fact that its difficulty is unknown since it has never been used before. This effect is compensated for by the transmutation scale, with, in the main, substantial justice done to the students. The over-difficult examination in algebra may drive pupils into panic and reduce their effectiveness on the test. The over-easy paper in English does not begin to measure the potentialities of the gifted candidate.

A still greater weakness of the always untried departmental examinations is its lack of comparability with previous examinations. Any device which would equate one examination in grade twelve mathematics with previous examinations would permit valid comparisons of students, classes, schools, and the annual group of candidates with students, classes, schools and group of candidates of other years. The problem is easily settled when the same examination is used year after year. This we have dismissed as unwise. How then, may we have examinations which differ from year to year, yet maintain roughly the same absolute standard?

The answer is compromise. Examinations which are, entirely or mainly, objective and short essay-type, based on an adequate pool of ques-

tions of known item efficiency and difficulty and which overlap to a greater or lesser degree from one year's examination to the next, will have a degree of comparability related to the overlap. College Board and National League of Nurses examinations, among others, use this procedure for securing comparability. The inclusion of items whose efficiency and difficulty are already known coupled with initial tryouts at least a year before new items are needed enable the tester to prepare an examination of the same validity and level of difficulty as previous examinations. This new examination, along with the old, is given to a sample of students in order to verify comparability. Not the least of the attractions of this procedure would be the elimination of those extremes in difficulty which produce the panic which causes one pupil to 'blow up' and do his knowledge less than justice, and another to be examined without having his superior level of insight even challenged, let alone measured.

RECOMMENDATIONS

- 87. Until more effective means of evaluation and prediction are found and proven, the Department of Education should continue its examinations in Grades IX and XII as presently organized and administered.**
- 88. Efforts should be made to improve the validity, reliability, objectivity, and comparability of the Grade IX and Grade XII examinations.**
- 89. The ratings on Grade IX and Grade XII departmental examinations should continue to be made by the application of statistical criteria, but these criteria should be continuously scrutinized and modified where advisable. Such modification should consider:**
 - (1) The extent to which standards or achievement remain consistent over a period of years;**
 - (2) The degree to which departmental examination standings serve as a basis of selection of students for admission to the various faculties of the University;**
 - (3) The degree to which competent students may, by the present method of determining standings, be excluded from advanced training in academic and technical institutions;**
 - (4) The degree to which departmental examination standings serve the needs of those high school students who will not likely achieve matriculation standing or who do not plan, for one reason or another, to attend University.**
- 90. A study should be made of the merits and demerits of accreditation as compared with province-wide examinations as the means of determining the basis of high school graduation and university admission.**

STANDARDS FOR POST-HIGH SCHOOL EDUCATION

The law of the Province of Alberta specifies that a child shall remain in school until he has passed his fifteenth birthday. For children between the ages of six and fourteen the schools are legally for "all the children". A generally accepted attitude today is that educational opportunities for boys and girls should be extended much beyond this minimum legal position. There are few advocates for an attitude that would dictate that at 15 years of age a child lacking the particular type of ability to make him a "scholar" should not be entitled to, and even encouraged to, continue to attend school. Ages of 15 and 16 years are not the usual ones for seeking remunerative employment in our economic organization. It is a normal expectation that most boys and girls fit into society in the best way by attending school, rather than by being employed.

The present organization provides for promotion of students as follows:

- Grades 1 to 8—Promotion from one grade to the next by teacher recommendation
- Grade 9 —Promotion to Grade 10 by standing gained in Departmental examinations
- Grades 10 to 11—Promotion by subject (rather than by full grade) based on teacher recommendation
- Grade 12 —Promotion by subject on standing in Departmental examinations. (There are exceptions to this in such subjects as Mathematics 31, Typewriting 30.)

The operation of this organization is governed by statements of policies which are designed to make the methods reflect the purposes of the school. The statement of official policy concerning departmental examinations is in terms of statistical criteria. In this case policy automatically becomes practice.

Statement of policy, where teacher recommendations are involved, is rather more difficult. Such a statement covering grades one to eight has been most effectively made in a *Promotion Policies Report* published by the Department of Education in 1954. This report has exercised an effect on practices in the grades covered. A Promotion Policies Committee is currently working on a similar study which will pertain to the senior high school. The greater complexity of the situation at this level, however, makes it unlikely that the results of the work of this group will be as direct and explicit as were the results of the grade one-to-eight group.

1. Factors Affecting Standards for Post-High School Education

To say that the school is responsible for all the children does not say that it must desert its older function of giving effective training to students who have academic ability, and who may reasonably be expected to move through a program of training that will lead them to competency in busi-

ness, industrial, and professional fields. The school is quite definitely concerned with producing "scholars". Such students must, at all times, be challenged to the levels of their abilities. Their training moreover should be carefully articulated with the needs of the university and other institutions for higher education.

A subtle temptation confronts the teacher and the educational administrator in organizing the school to produce scholars. He is tempted to institute promotion procedures which will eliminate doubtful cases. These include those who might have the ability to benefit by this training, those who are being quite normal boys and girls by not giving their best attention at the moment to their studies, and those whom the school's measuring devices have failed to assess adequately. A recently published report of the Alberta Matriculation Study Sub-Committee states:

It has been estimated that 12.5 per cent of the children in any age group are capable of profiting from instruction in a first class university. In 1955, only about 1,000 Alberta students entered degree programs in the university, whereas the proportion indicated above would have meant about 2,500 freshman students.

The function of the high school curriculum and particularly of high school promotion practices should be to approach the ideal position far more closely than it does. This cannot be done by eliminating more students.

One further point should be noted in commenting on the function of the school as a training and selection agency for matriculants, and for other institutions offering further specialized training. Alberta provides for senior matriculation in 12 years — not 13 as is the case in British Columbia and Ontario. If a function of the school is to select as many students as possible of the group who are capable of benefiting by university training, it should select in 12 years about the same group as the provinces with the thirteen-year school program. It is obvious, if this conclusion be recognized as valid, that there will be differences of achievement standards because of the one-year difference in education. Adaptations, on the part of both the high school and the university, are essential to make adjustments which will cover training requirements.

Promotion practice, therefore, must concentrate on this twofold function of the school. To provide general education for a school-age population and to provide academic training for academically able students is not an easy task. It requires skillful organization of curriculum and a careful consideration in terms of function of promotion policies and practices to be followed.

2. Matriculation and Other Post-High School Entrance Requirements

The Alberta Teachers' Association believes that standards for matriculation and for entrance into non-university post-high school educational institutions is a matter for scientific study. The success of students in these post-high school institutions can be the subject of investigation in terms of their high school records. In this connection, the Association

believes that wider bases of selection than the strictly academic ones now in use deserve consideration. It is possible that teachers' and principals' recommendations; data on the student's interests, work habits, ambitions, extra-curricular activities; and on the family plans, aspirations, and financial situation would all contribute to a sound admission program.

Another matter for continuing study is the possibility of differential admission requirements to the University of Alberta. Visitors from other Commonwealth countries have expressed surprise that the student who wishes to take fine arts at the University of Alberta must meet essentially the same entrance requirements as the student who wishes to take Engineering. S. C. T. Clarke in "Review of Some Previous Studies on Matriculation Problems," *The Alberta Journal of Education Research*, Vol. 4, No. 1, March, 1958, shows that recently there is a "trend toward differential prognosis of university success, accompanied by differential admission requirements." In any study of Alberta matriculation, this consideration should not be overlooked.

RECOMMENDATION

91. A continuing study of matriculation requirements should be made by a competent research staff under the direction of the Matriculation Study Committee of the Joint Committee to Co-ordinate High School and University Curricula, including within its consideration both academic and non-academic types of data on students, and differential admission requirements.

CHAPTER 8

SPECIAL SERVICES

The need for special services such as guidance, curricula and treatment for the bright and the dull, and health services, is present in any group of children. If the number of children is small, economy and practicality require that the special services be performed as adequately as is possible by the classroom teacher. In large systems specialization is desirable, economical, and practicable, and therefore is demanded.

GUIDANCE AND COUNSELLING FOR ALBERTA SCHOOLS

1. Functions of a Guidance Service

Arthur J. Jones in *Principles of Guidance* defines the purpose of guidance:

The purpose of guidance is to assist the individual through counsel to make wise choices, adjustments, and interpretations in connection with critical situations in his life in such a way as to ensure continued growth in ability for self-direction.

The Alberta Department of Education Curriculum Newsletter No. 7, February, 1957 is devoted to guidance and defines it as follows:

That aspect of education concerned with helping students to understand their potential abilities, develop purposes or objectives in life, plan forms of action toward those objectives, and proceed to realize them. It is commonly considered as including three phases—educational, vocational, and personal, this last embracing such things as the social and emotional life of the student.

Guidance is sometimes confused with discipline. Counsellor work with a discipline case to determine causes, to change attitudes, to develop self-control, is guidance; judging guilt, meting out punishment, and making regulations is not guidance. Guidance is often confused with remedial work. Counsellor work with a student to determine causes of poor marks, to determine level of skill in relation to level of ability, and to improve general habits and attitudes toward study is guidance; but planning a sequence of exercises, and providing time and place for the student to do remedial work, is not guidance. Guidance may also be confused with regulation. Counsellor work with an individual in considering his abilities, present achievement, and motivation in relation to high school choices he **may** make, is guidance; but such school regulations that "no student with less than a B standing may take Science 10" is not guidance.

The following functions (stated as objectives) of the guidance program in Alberta schools are listed in the *Junior High School Handbook*, 1955, Chapter V:

1. To assist pupils entering the Junior High School to become adjusted to their new school situation

2. To assist pupils in planning their program for both the Junior and Senior High Schools
3. To assist pupils in achieving school success
4. To assist pupils in the solution of personal, social and emotional problems
5. To assist teachers in planning individualized instruction
6. To provide necessary guidance in their school work and possible career choice to pupils entering the Senior High School
7. To provide information for vocational guidance and placement.

In practice, these diverse functions may receive different amounts of attention. Thus one guidance service is largely devoted to problem students in high school classes, a second spends much effort on laggard students, while another stresses career information and career planning. One of the major problems of the function of guidance is maintaining a balanced program.

2. The Need for Guidance

The need for guidance services has been established, the nature and extent of these services depends on a number of conditions. If the total system consists of a geographic area of one township, and has one school with 23 pupils, obviously it does not need a vice-principal, a principal, and a superintendent of schools; and by the same token it does not need a school counsellor nor a director of guidance. The need for guidance services is caused by: (1) the increased complexity of the world at work; (2) the teacher, in many instances, no longer knowing the student's home, family, and community; (3) the increased range of choice in modern secondary education; (4) the specialized skills required to perform the guidance function adequately; and (5) the increased proportion of young people who continue to high school.

Guidance services are required for Alberta schools because they are becoming more urban and more centralized. Thus in 1935 there were 2,934 one-room schools while in 1957 there were 512. In 1953-54 there were 179 schools or systems with 11 or more classrooms, while in 1956-57 this number had increased to 268. At the same time, Alberta schools are holding more children for a longer time. In the school year 1936-37 the proportion of Grade XII students to beginners 12 years previously was 15, while in 1955-56 this same figure was 43. Another way of expressing the change is that in 1912 the per cent of the total enrolment in grades 9 to 12 was 3.92, while in 1955-56 the corresponding per cent was 19.50. Alberta's population is becoming increasingly urban. In 1921 the urban population was 38 per cent while in 1951 the urban population was 52 per cent of all Alberta's population.

Guidance services are required for Alberta schools because they are becoming more departmentalized. Teachers have less opportunity to know the children's parents and homes. As is true in other places,

the world of work is becoming increasingly complex. Special skills and knowledge additional to ordinary teaching skills and knowledge are required for guidance work.

Specifically, guidance is needed for placement of students in composite-type high schools. The under-achievement of students who have high ability requires the attention of the counsellor. The provision of up-to-date occupational information for high school students, combined with information about the students' interests and abilities, is a recognized function of guidance. Finally, the personal problems of students, which may interfere with school learning or may interfere with the learning of others, are a recognized responsibility of the guidance service. Such problems include bad attitudes, habits of carelessness, fears and worries, defiance of authority, lack of clear goals, and many other conditions which may eventually result in an ineffective worker and citizen.

Such personal problems have been estimated by three British surveys to affect between 5 and 11 per cent of all children. ("Report of the Committee on Maladjusted Children": London, Her Majesty's Stationery Office, 1955).

3. Criteria for Guidance Services

It is generally agreed that in order to fulfill the functions outlined previously, a guidance service must provide:

1. A complete individual inventory service (recorded as in cumulative record)
2. An occupational, educational, and social information service
3. Individual counselling
4. Placement
5. Follow-up
6. Research.

The physical facilities should include appropriate private offices, filing cabinets, office equipment and supplies. Secretarial help is considered an economy. Library and display space is necessary.

The time devoted to counselling at the secondary school level is generally expressed as follows: one full-time or two half-time counsellors for 300 to 500 pupils. Another index of effort in guidance is the per cent of total school budget, exclusive of debt retirement which should be allocated to such things as counsellors' salaries, equipment and testing materials.

Counselling personnel should have three characteristics. One of these is a warm, considerate, courteous and tactful personality. A second consideration is teaching experience. It is desirable that a counsellor have taught or be currently teaching in the school system in which

he serves. The third is education. A degree, with additional work in child and educational psychology, in tests and measures, and in techniques of guidance, is generally prescribed. Many states in the U.S.A. require a guidance certificate.

In large systems, such as the cities of Edmonton and Calgary, supporting-specialists services are required. School psychologists, visiting teachers, social worker - attendance officers are minimal. Child guidance clinics (like the Greater Winnipeg Child Guidance Clinic) are desirable.

4. Guidance Services in Alberta

The Annual Report of the Department of Education contains little information on the extent of guidance services in the province. The fifty-first (1956) report mentions 124 part-time and full-time teacher-counsellors in the high schools of the province, and 50 career events affecting 9,000 students.

Most of Alberta's school counsellors are in the cities (Edmonton 49, Calgary 72, Lethbridge 8, Medicine Hat 8). In 1958 the majority held degrees, but 100 out of 138 polled did not have either the Junior or Senior Certificate in guidance.

Very few receive extra pay. There are not many full-time counsellors in the schools of Alberta.

The above description provides only a rough picture, but it is one of inadequate provisions. There is a real need for a good study of the status of guidance in Alberta.

RECOMMENDATIONS

- 92. A thorough study of the extent, nature, and quality of present guidance services in the province should be made.**
- 93. School boards and their administrative officers should adopt a policy of selecting for guidance positions teachers with suitable personal qualities, and should encourage them to secure further education.**
- 94. The Faculty of Education should offer laboratory-type courses in the techniques of guidance more frequently in summer sessions.**
- 95. The Faculty of Education in consultation with other agencies should develop and offer a training course for "visiting teachers".**
- 96. School boards and their administrative officers should provide good working conditions for school counsellors, with respect to time and load, offices and equipment, and secretarial help.**
- 97. School boards should require when possible special training in guidance of their counsellors and other guidance personnel.**

98. School boards should not overlook school counsellors as a source of administrative personnel.
99. The training for school counsellors should be recognized within the regular salary schedule provisions.
100. The extension of guidance services to centralized schools beyond the cities is an urgent matter requiring co-operative efforts of school boards, administrative officers, and the Department of Education. The teacher shortage should not be used as an excuse for no action, because effective guidance would tend to reduce the teacher shortage by improving holding power of schools and thus increase the pool of matriculants.
101. Further professional education for counsellors should be provided through the Evening Credit Program.
102. In-service education of school counsellors should be encouraged.
103. In school systems large enough to warrant this service, visiting teachers and school psychologists should be provided to assist the classroom teacher, especially in the elementary schools, in the performance of their guidance functions.

THE REQUIREMENTS OF GIFTED PUPILS

The term "giftedness" is used to mean high general intelligence, or special talent in such areas as music, dramatics, and art. For this brief, giftedness will be restricted to the first meaning: high general intelligence.

In a world increasingly in need of trained minds, we continue without even a declared policy for the identification and education of our gifted children. D. Wolfe, in *America's Resources of Specialized Talent*, New York, Harpers, 1954, showed that in the United States, of students in the highest two per cent of intelligence, nearly 40 per cent fail to get to college. R. W. B. Jackson in "Guilty of Brain Slaughter," *Education Forum*, Vol. 6, No. 5, December, 1956, concluded from a Toronto study that only one out of every five academically gifted enters college. In Alberta, the Matriculation Study Committee in its February, 1958 *Progress Report*, showed that of the Grade XII students who rated in the top quarter on a scholastic aptitude test, 29.2 per cent continued on that year to the University of Alberta while 70.8 per cent did not. The Alberta Teachers' Association takes the position that failure to develop the talents and potentialities of the gifted is detrimental to the individual and to society.

1. Identification of the Gifted

Giftedness can be discovered by use of group intelligence tests for general screening and individual intelligence tests for precision measurement. Classroom performance and achievement and the judg-

ment of teachers will also be of value in identification. The identification of the gifted should start in grade one, when the child enters school. The teaching staff must use systematic group testing, followed by individual intelligence tests such as the 1937 Revised Stanford—Binet, the Wechsler-Bellevue, or the Wechsler Intelligence Scale for Children, to confirm the group rating. The early identification of the gifted, coupled with a suitable program for them, avoids the danger that Terman noted: lack of recognition in the ordinary classroom, and subsequent underachievement. Under conditions lacking challenge, they may develop careless habits, boredom, and loss of interest in education.

How gifted must a child be to justify early identification and a carefully planned and challenging school program? S. R. Laycock in *Gifted Children*, Toronto, Copp Clark, 1957, gives the following distribution of intelligence: the top 1 per cent have an I.Q. of 137 and above; the top 2 per cent are at I.Q. 133 and over; the top 3 per cent are at 130 and up; the top 5 per cent have an I.Q. of 126 or over. It should be borne in mind that these percentages hold true for certain intelligence tests in the elementary school. For other intelligence tests, or for the more select student population of the high school, they would be in error. Many special schools for the gifted have set their lower limit at I.Q. 130. Because of the appreciably greater number included without a marked lowering of the level of intelligence, let us set the lower limit at I.Q. 126, and define the group to be identified and singled out for special treatment as the upper 5 per cent of our elementary school population. This would likely include the potential leaders in science, the professions, business and industry and government.

2. Acceleration of the Gifted

Since the gifted tend, on the average, to be taller, heavier, stronger and healthier than average children, it is suggested that they may proceed through the regular school grades at an accelerated rate. Hollingworth asserted that the gifted children of I.Q. 135 could complete the requirements of the ordinary classroom in one half the time. W. H. Johnson, in "Program for Conserving our Superior Elementary School Children," *Educational Administration and Supervision*, 29, 1943, produces evidence to show that failure to accelerate is harmful. P. A. Witty and L. W. Wilkins in "The Status of Acceleration or Grade Skipping as an Administrative Practice," *Educational Administration and Supervision*, 19: 321-46, 1933, indicate that the educational attainment of gifted pupils in unsegregated classes falls far short of expectations based on intelligence. Sumpston, Norris, and Terman, writing in the forty-ninth yearbook of the N.S.S.E., note that:

moderate acceleration, particularly in high school and college, is not inadvisable when the individual is socially and physically mature for his age . . . It is quite possible and desirable to save one or two or even three years of the individual's educational life when he is well advanced in social and physical maturity.

Acceleration is usually accomplished by covering two years' work in one year, or, better, three years work in two years. It should never be accomplished by grade skipping. The practice of acceleration does force the gifted child to extend himself. It lessens the likelihood that he will develop sloppy, inefficient habits of thought and work. It challenges him to strive effectively in a situation where the work is fresh and stimulating.

On the other side of the argument there is always the danger that acceleration may move the gifted child into a group too advanced physically and socially for him to feel at home. He may become disturbed emotionally and withdraw from the group in which he finds himself an alien. It may also be argued that acceleration takes him over the curriculum more rapidly; it does not confront him with the enriched knowledge and experience his capacities deserve and from which he might profit most.

Various procedures have been developed for accelerating superior children. The unit-promotion plan groups children in terms of proven ability, and allows them to complete the standard units of work at the rate of the superior group. Each unit must be mastered according to accepted standards before proceeding to the next. This method gives controlled acceleration but fails to meet the needs of the gifted for more challenging learnings and activities.

The Canadian Education Association through its *News Letter*, April, 1955, informs us that, of 39 Canadian school boards reporting, 13 had no acceleration, 15 accelerated only one year and 11 allowed an acceleration of two years. R. L. Havighurst in *A Survey of the Education of Gifted Children*, Chicago University Press, 1955, tells us that the 62 junior high schools of New York have "special progress classes" which complete the three years work in two years.

Acceleration in high school has not been widely used. The Ford Foundation has sponsored entrance into college with advanced standing for superior students. Others have allowed accelerated progress in subject matter areas whereby the work of three years may be completed in two.

The current attitude toward acceleration as a solution of the problem of the gifted might be summed up as follows: (1) Limited acceleration is possible and even desirable, as long as the utmost care is taken to see that the gifted child does not get into a situation where his physical, social, and emotional immaturity make him feel a misfit; and (2) acceleration may fail to confront the gifted child with more challenging work and engage him in the more mature intellectual activities which his abilities warrant. Nevertheless, moderate acceleration would be of help to many gifted children.

3. Special Grouping for the Gifted

Gifted children may be grouped in special schools, in special classes, or in special streams in the ordinary classroom. In general,

grouping does not include acceleration, although moderate acceleration might well be part of the procedure. Rather it places emphasis on providing an enriched curriculum and more challenging classroom activities which permit the gifted to secure a better body of skills and knowledge and a more advanced type of experience than would be possible in the ordinary classroom. In special schools for the gifted, such as Hunter College Elementary School, or the Bronx High School of Science, admission is on the basis of superiority in intelligence. The program in each case is one of enrichment with emphasis on workshop, laboratory procedures and vastly increased challenge to individual and group effort.

Special classes for the gifted are fairly common in large schools where segregation into ability groups may be practised with enriched courses, more challenging texts, and enlarged library and laboratory activities. The absence of carefully planned enrichment programs has hurt many such ventures. Mere grouping alone will not enrich a program. One of the most outstanding and successful examples of special groupings is found in Cleveland's Major-Work Classes. Rooms are limited to twenty-five students. Usually gifted children from three grades are included in one room. The program is one of enrichment. There is much creative work in writing, drama and art. The pupils are active, read widely, and study typing and French at an early age. Emphasis is on individual and group research. The pupils concentrate on large and stimulating units of work.

There is no doubt that this approach permits the undertaking of a curriculum and program of activities which can be at the highest level of challenge for the gifted. One thing is certain. It can only succeed where the community, parents, and teachers give it their support. It is widely criticized for producing class or caste education, for stigmatizing the children as queer, or recognizing them as the privileged elite. It is contended that it robs the other classes of the stimulation which bright children furnish. Unless these attitudes are checked, special grouping will prove difficult to implement.

Partial segregation is, perhaps, a better designation of this system of grouping. It implies that outside of what happens in the special room, each gifted child will return to the school community, serving as monitors, traffic guides, entering the sports program, the school clubs and societies and the various agencies of student government.

Special grouping is one of the recommended methods in making possible a program for the gifted. It permits a stimulating curriculum. It makes possible an increased variety of activities and occupations which are recognized as desirable. It allows selection of well-prepared teachers to lead these special classes.

Such classes are possible in the large composite high schools, in the multi-room junior high schools and in the large graded elemen-

tary schools. Where schools are smaller it might be possible to draw the gifted from several adjacent schools. It is not even necessary that all the children in the one room be from the same grade. As mentioned before, the Cleveland Major-Work classes have gifted from three grades in one room.

For special grouping to be successful, it must have the support of parents, teachers, press, and public. Studies to determine what support would be forthcoming are in order.

4. Enrichment Within the Ordinary Classroom

It has been emphasized that grouping of the gifted into special classes makes possible an enriched curriculum and a vitalized program of procedures and activities which has the greatest promise of improving the educational offering. Can anything of this type be attempted in the ordinary classroom?

In classrooms where the superior children are treated as a separate group their program may be systematically enriched by a multitude of activities. They may work with more challenging texts and workbooks; do advanced reading on their tasks; do systematic library research; attempt creative writing, art and drama; make collections, do laboratory work, and many similar projects. What is required is a carefully and sensibly prepared program for the gifted few, with the library resources, the facilities and the materials needed for its execution. This must be prepared for a year's program at each grade level, if it is to be successful. It can be successful without undue demands on the teacher's time, and without disrupting the work of the remainder of the class.

One sees this enriched program for the superior children as being wise pedagogically in any classroom. All it requires is a plan of enrichment, prepared by expert teachers and advisers, and printed or mimeographed for the guidance of the teachers. Such a procedure would not require widespread public understanding and support, yet it could be quite effective.

RECOMMENDATIONS

- 104. Early and continuous efforts should be directed toward the identification of the gifted children in all grades of our schools.**
- 105. Acceleration not exceeding two years in twelve should be considered for the gifted when they are physically, socially, and emotionally advanced for their years.**
- 106. Acceleration of the gifted should not be accomplished by grade-skipping.**
- 107. Special classes for all or part of the school day should be tried out by large school systems to determine the reaction of parents, teach-**

ers, press and public. An enriched curriculum, multiple rooms at each grade level, teachers interested in a program for the gifted, and the requisite equipment, library, textbooks, and other facilities must all be present for the fair trial of special classes for the gifted.

108. Local or provincial committees should plan and publish enriched curricula for the gifted at the various grade levels.
109. Planned enrichment for gifted children in ordinary classrooms should be investigated.
110. Small classes which permit individual attention and adequately trained teachers should be used in conjunction with the other measures recommended for gifted children.

THE REQUIREMENTS OF THE MENTALLY RETARDED

Education must make provision for children having a deficiency of intelligence. To outline the problem let us examine the following classification which includes roughly the lowest twenty-five per cent of all children:

1. I.Q. 0 - 35 Idiots and low grade imbeciles, unable to profit from anything approaching an educational program. In Alberta these children are taken care of in the Provincial Training School at Red Deer.
2. I.Q. 35 - 50 Children with severe mental retardation. Many centers, such as Edmonton and Calgary, have established institutions which give the children training in healthful, organized group living at the sub-academic level.
3. I.Q. 50 - 75 Children capable of modest academic achievement whose needs are best met in the 'special class' under specialists in training of subnormal children.
4. I.Q. 75 - 90 The slow-learning pupils who are usually retained in the ordinary classroom.

Because I.Q. is not the only determiner of suitable placement, the above statement must not be interpreted to mean that the Provincial Training School has no children of I.Q. 35 - 75 nor that the centres mentioned for Edmonton and Calgary include only children with I.Q. 35 - 50.

The 35 to 50 I.Q. group is being cared for in the larger centres in special institutions to which the children are brought during school hours. Here special teachers give them the individual and group training which they require for healthful and useful living. They are at a level at which education in the ordinary sense is impossible, but they

profit greatly from training in cleanliness, care of themselves and their environment, habituation to acceptable standards of behaviour and group living, self-protection, and appreciation of games, activities, pictures and music.

ALBERTA SCHOOLS FOR SEVERELY MENTALLY RETARDED CHILDREN, 1958

Place	Enrolment	Teachers	School Started
Edmonton	87	9	1945
Calgary	50	5	1953
Lethbridge	17	2	1955
Medicine Hat	9	1	1955
Grande Prairie	11	1	1955

Most of these schools have volunteer assistants in addition to the teachers. Seventy-five per cent of the cost per pupil per year up to a maximum of \$360, and up to \$7200 per classroom for construction, is granted by the provincial government if the local school board approves the school.

Two questions must be asked concerning schools at this level. First, are the children in these schools carefully screened to insure that they are properly placed? The claim that some children in these schools can develop some reading and number skills should be evidence that they do not truly belong in a training school. This should be verified annually by rigorous inspection by competent officials of the Departments of Education and Health.

The second problem is that of responsibility. The Department of Education would seem to retain its responsibility since it pays grants to such institutions although the actual direction may be entrusted to local organizations other than the school board. Eventually the question of local responsibility must be re-examined. It may be that the maintenance of such schools should reside with the local school board and be controlled and financed in the usual manner. Certainly the Department of Education should insure that such institutions conform to governmental regulations in so far as selection of pupils and type of program are concerned.

1. Education of Children I.Q. 50 - 75

This group comprises approximately 2 per cent of our school children. They are educable in varying degrees in reading, writing, language and arithmetic, and unskilled and semi-skilled occupations. They are so deficient in intelligence, however, that they require special curricula and teaching if they are to measure up to their limited potentialities. As Fransden writes, in his book *How Children Learn*, McGraw-Hill, 1957:

At six years a child whose I.Q. is 50 has a mental age of only 3-0. He will not be ready to begin first grade reading until he is about

twelve years of age, at which time his mental age will be about 6-0. If he enters school at the usual age he will need to spend the first six years in a prolonged pre-academic curriculum. Even if a child's I.Q. is as high as 75, at six years of age his mental age is only 4-6. Not until he is about eight years old will his mental age be six, at which level some success with beginning reading should be possible.

SPECIAL CLASSES IN ALBERTA, 1956-57

School Board	Nature of Class	Enrolment
Calgary Public	Subnormal, 6 opportunity classes	15.6
	Sight-saving, 1 class	9.0
	Hard-of-Hearing, 1 class	9.1
	Cerebral Palsy Clinic, 1 class	---
	New Canadians, 1 class	24.8
Edmonton Public	Subnormal, 8 opportunity classes	14.4
	Sight-saving, 1 class	7.0
	Hard-of-Hearing, 1 class	11.9
	Cerebral Palsy Clinic, 1 class	---
Calgary Separate	Subnormal, 1 Opportunity class	10.0
Edmonton Separate	Subnormal, 3 Opportunity classes	12.0
Lethbridge Separate	Subnormal, 4 Opportunity classes	15.6
Medicine Hat Public	Subnormal, 3 Opportunity classes	12.5

The data on special classes in Alberta are taken from the *Fifty-second Annual Report of the Department of Education*, 1957, P. 52. It appears likely that the heading "Lethbridge Separate" may be an error for "Lethbridge Public." As can be seen from the data given, special classes for the mentally retarded of I.Q. 50 - 75 are found almost exclusively in the cities, although there is the beginning of an extension into school divisions. Centralization makes possible the provision of opportunity classes in rural areas, since the same buses can bring the mentally retarded to a central class. In general, there are insufficient provisions in Alberta for mentally retarded children.

2. Education of Slow Learners I.Q. 75 - 90

These children are frequently retained in the ordinary classroom where their progress is limited and painful. Since they frequently lack the optimum mental age, they usually have difficulty in learning how to read. The pace of the class is too rapid for them. They fail to receive the simplified program which they require. It is true that they exert great effort, and indeed, accomplish a great deal.

It is unsound, however, to fail to meet their needs if this can possibly be done, as maximum progress for their abilities will fit them for becoming self-respecting and successful citizens. Irwin and Marks point out that frustration and discouragement frequently result in increased delinquency rate.

In the larger school systems the slow-learner can frequently be placed in a special class. At the least they can be grouped together in the ordinary class under a less taxing curriculum, and with methods of teaching and study best suited to their needs.

RECOMMENDATIONS

111. Teachers of special classes for the mentally retarded should have a four-year degree program leading to general certification plus additional courses in the field of special education.
112. Interprovincial co-operation among the Western provinces in the education of teachers in the field of special education should be explored at the governmental level.
113. The identification of mentally retarded children should be made as early as possible.
114. Provision of special opportunity classes should be made in all systems large enough to warrant such classes.
115. Opportunity rooms should be located within a regular school, and the children should take part in as many school activities as possible: assemblies, films, and sports.
116. In systems large enough to warrant this, a differentiated program for boys and girls of low mentality, leading toward vocational as well as academic objectives, should be initiated about age thirteen.

SCHOOL HEALTH SERVICES

Supplementary memorandum number five deals at length with this matter. It is pointed out there that the increased contacts forced by compulsory education present the school with special responsibilities for the health of school children. In addition, children with certain defects such as poor eyesight or hearing can not learn readily. The school also has a responsibility for inculcating health habits.

It is assumed that the parents are primarily responsible for the health of the child, and that routine treatment is not a legitimate responsibility of the school. It is recognized that the extent of the health service will depend on the size of the system, and in rural areas, with the presence of Health Units. A basic minimal schedule of school health activities is presented in supplementary memorandum number five.

RECOMMENDATIONS

117. In systems large enough to warrant this, the school health service should be directed by a medical officer post graduate trained in public health.

118. Nurses in the school health service should be trained in public health.
119. A suitable office should be provided in each large school served by a school health service.
120. In large systems, additional services should include a dental officer, psychiatrist, and consultant.

FINANCIAL AID TO HIGH SCHOOL STUDENTS

Supplementary memorandum number six gives further details on this topic. Hidden costs in terms of books, school supplies, materials for courses, special clothes, fees for hobby clubs, graduation, and other social functions are considered to be an expense to the parent. Research on these costs in the United States is summarized. The position taken in the research quoted is that school authorities should keep hidden costs at a minimum. No data on scholarships for attendance at high school are presented.

RECOMMENDATIONS

121. A series of studies, perhaps starting with each of the province's composite schools, should be made to determine the "hidden costs" both school-imposed and extra-curricular.
122. In connection with a study of Alberta drop-outs in various schools, one item to investigate would be the financial factor. An effort to determine the effect of scholarships, bursaries, and loans on high ability drop-outs should be made.
123. The above studies should be co-operative, involving administration, faculty, students, and parents.
124. School boards should determine policy on hidden costs for their system.
125. Hidden costs should be reduced by measures such as:
 - (a) An "all activities" ticket
 - (b) A school-operated supplies store
 - (c) A close scrutiny by the administration of costs of materials and supplies for certain courses, such as art, industrial arts, physical education
 - (d) Textbook rentals
 - (e) Close control by student council of the costs of student activities
 - (f) Careful review of graduation costs with a view to reduction.
126. The effect of scholarships, bursaries, and loans to high school students, where used in other places, should be studied. This would determine the wisdom of using these measures in Alberta, and the methods to adopt.

CHAPTER 9

THE ORGANIZATION OF SCHOOLS

SCHOOL BUILDINGS AND FACILITIES

Other things being equal a good teacher will do better work if he and his pupils have a good environment in which to teach and learn. The following excerpts from a report of the *National Council on Schoolhouse Construction* entitled "Guide for Planning School Plants," 1949, are typical of the attitude to be found in the literature about school buildings and facilities:

Educational plants cannot be planned intelligently until the scope of the program, curriculum content and basic educational methods have been determined and these determinations can be made only with a sound philosophy of the aims and purposes of education as a base. . . .

It should also be borne in mind continually that the plant is being planned not for today alone but for the next fifty years. . . .

The purpose of the school plant is to provide the physical facilities for the educational program. . . . The major consideration transcending all others in planning a school building is the educational program to be housed. . . . A school building must be designed from the inside out instead of from the outside in.

In most cases, no effort is spared in making public buildings as functional as possible, and in providing facilities and conveniences that make workers more efficient and that improve the service rendered to the public. It would be false economy to do anything less than this in the planning and building of the school plant.

There is, however, a serious lack of objective data on the adequacy and suitability of existing school facilities, and on the kind needed to provide best for the implementation of the Alberta Program. There are differences of opinion as to the need for providing special rooms such as auditoria or gymnasias.

Indicative of teacher opinion are these policy statements and resolutions which have been approved by the Annual General Meeting of the Alberta Teachers' Association (1954):

1. Be it resolved that the Alberta Teachers' Association ask the Department of Education to make provision for all schools to have adequate staff rooms, including principal's office, a general staff room, projection room, library, auditorium, gymnasium and students' lunch room.
2. Whereas, in many of the new schools which are being built, the architects' plans have not met the needs of the community for which they were designed, necessitating alterations subsequent to completion of building at increased expense to the ratepayer;

Be it resolved that the local teaching staff and other responsible groups be consulted at all stages of the planning and designing of school buildings.

It is safe to assume that many older schools are both inadequate and unsuitable to the present school program. It is possible, too, that some newer school plants are not properly planned. In view of the great amount of school building presently going on, these data, as well as data on the degree of utilization of the facilities provided should be obtained, and should serve as guides to the further improvement of school plants both old and new.

RECOMMENDATIONS

127. Studies should be initiated by the Department of Education to determine the adequacy and suitability of facilities and the utilization of plant and equipment, with consideration being given to these studies being done under the direction of the Alberta Advisory Committee on Educational Research or by graduate students in the Division of Administration in the Faculty of Education.
128. The Department of Education should set up regulations requiring school boards to advise and consult with members of teaching staffs who are to use the new buildings.
129. The Department of Education should set up certain minimum requirements for school buildings and the facilities to be included therein, basing these requirements on the study suggested in 127.
130. The Department of Education should continue to encourage school boards to replace inadequate and outdated school buildings and facilities by further increasing provincial grants for capital expenditure.

THE SEMESTER SYSTEM IN HIGH SCHOOLS

The semester system operates at present in few Alberta high schools. There are two kinds of semester organizations. The first kind is found at Alberta College, Mount Royal College, and Cardston High School. It divides the year into two terms: September 1 to January 31 and February 1 to June 30. The second kind, found at the Lindsay Thurber Memorial High school, commonly called the Red Deer Composite High School, divides the year into three terms, with a fourth term added through the Department of Education's summer session. For regular high school students, however, the normal year at the Red Deer Composite High School is the three-term system.

1. Advantages of the Semester System

(a) Flexibility

- (i) The semester plan meets the need of adults who lack one to three subjects for university entrance. Three-and-a-half

months (Red Deer) or five months (Cardston) will give a student three subjects.

- (ii) It is possible to take three Grade XI subjects in one semester prior to taking these three subjects in Grade XII in the next semester. In a ten-month organization, a student would need to spend two years at the school in order to do this.
- (iii) In several schools pupils weak in mathematics are required to take two semesters in Mathematics 10. This is done in order to improve the preparation of the students for Mathematics 20 which will admit them to certain technical courses in the Calgary Institute of Technology and Art. This arrangement could be carried out in the ten-month school, too, by giving students 70 minutes a day of Mathematics 10.
- (iv) A student who has failed in a Grade XI subject in June may repeat that subject in the fall semester. If he is successful, he may proceed to the subsequent Grade XII subject in the spring term. If this student had been attempting a total of 75 credits in Grade X and XI, he would thus still be able to qualify for university entrance in three years.
- (v) At Red Deer it is possible for a special student who lacks two Grade XII subjects and all their pre-requisites to take all of these subjects in one year. Examples are Mathematics 10, 20, 30; French 20, 30.
- (vi) The Red Deer quarter system allows some farm pupils to complete three subjects during the winter term. The number of farm students taking advantage of this semester arrangement is not great, but the service is of value to them.
- (vii) Students from small schools with poor commercial and shop facilities may attend a semester plan school for one year and get two years of work in their specialties. For example, a student may take Automotives 10 and Metals 10 in one semester, and Automotives 20 and Metals 10 in the second semester.
- (viii) Students who do not intend to complete high school but who wish to have training in a special subject may take all three units of the subject in subsequent semesters, e.g. Woodwork 10, 20, 30. Cardston currently has 3.6 per cent of its students in such "terminal" courses.

(b) Quality

- (i) Principals of semester schools assert that their schools have fewer drop-outs during semesters than their schools used to have on the ten-month plan. This means that more pupils are completing the courses they start.
- (ii) The motivating force of the short term to the pupils is considered by the teachers to be an advantage. The end of the semester always seems to be close.

- (iii) Some pupils prefer to concentrate upon a few subjects at a time.
- (iv) All schools on the semester plan report better results on the Grade XII Departmental examinations than when these same schools operated on the standard ten-month year. Figures obtained from the Principal of the Lindsay Thurber Composite High School at Red Deer indicate results under the ten-month plan, and under the semester plan. The figures indicate the percentage of papers passed in each subject with University entrance standing:

Subject	1947-49 Ten Month Plan	1949-51 Semester System	1949-57 Semester System
English 30	56.7%	61.5%	66.5%
Social Studies 30	52.9%	82.5%	79.5%
Trigonometry I	78.9%	76.0%	
Algebra	74.1%	78.3%	
Mathematics including Algebra 2, Trigonometry 1 and Mathe- matics 30			72.4%
Biology 32	51.6%	84.0%	84.5%
Chemistry 30	54.0%	84.0%	81.0%
Physics 30	75.9%	83.5%	80.0%
French 30	82.9%	83.0%	81.0%

The provincial record in these subjects is that 60% of Alberta pupils get university entrance on each subject; thus Red Deer, under the semester system, has improved its record markedly. This record may be due in part to a stable, experienced, and well qualified staff. It may result from the teacher's long experience with organizing teaching and study under a semester system. It should be noted that, though Red Deer accepts Grade XII students from all over the province and gets a very wide range of quality in these students, the academic record of the school has been consistently good.

2. Limitations and Disadvantages of the Semester System

1. A pupil must be in regular attendance if he is to keep up with his class work. An illness of several weeks duration may cause a student to lose subjects that he might not have lost under the ten-month term.
2. It is possible that some students may not do their best work under the heavy pressure of a semester system.
3. As long as final examinations are required for all matriculation subjects in Grade XII, the setting and marking of these final examinations will remain a problem. The Department of Education would find it extremely difficult to handle the thousands of

examination papers that would be written if many schools in the province were to use a semester plan. Once final examination papers number in the thousands, large numbers of teachers are required to mark these papers. If instruction has to be carried on by these teachers in their own schools the problem of marking would become difficult.

3. General Values of the Semester System

- (1) Since students are encouraged by the advantages of short terms to return to school, more pupils are able to receive more education.
- (2) Since schools appear to have fewer drop-outs during semesters than during ten-month terms, student attrition during terms is reduced.
- (3) More pupils may make use of school facilities in the course of two semesters than under a ten-month term. This means that better use and more economical use is being made of the school plant.

RECOMMENDATIONS

131. Because the four schools operating on the semester plan are providing a valuable service to many students of the province, the semester plan should be continued in these schools and the Department of Education should adapt its examination system to the needs of these schools.
132. A study should be made of the semester system, especially with respect to optimal length of class instruction period, the relative merits of two terms over three terms, the pupil retention of subject matter and university success of students taught by the semester plan.

THE SMALL HIGH SCHOOL

Technically, a small high school in this province is defined as a school in which the ratio of teachers to grades is less than one. This ratio usually exists in high schools of one and two rooms, and may exist in schools of three rooms. In these small high schools the number of pupils rarely exceeds sixty, and may be as low as fifteen. Typical organizations of small high schools are these as defined in the "High School Handbook":

One teacher for Grades	IX, X	
or	IX, X, XI	1(a) High School
or	X, XI	
or	X, XI, XII	1(b) High School

Two teachers for Grades	IX, X, XI	
or	IX, X, XI, XII	2(a) High School
or	X, XI, XII	2(b) High School
Three teachers for Grades	IX, X, XI, XII	3(a) High School

There are at least, two devices that are used to enable a small school to offer a full high school program in three years. One device is that of reducing the amount of instruction time given to each subject; in this way more subjects may be taught in a day. High school regulations allow some schools to teach subjects for 33, 27 or even 21 minutes per credit. In a standard instruction type of school, the teachers must teach a minimum 35 minutes for each credit. For example, in a standard-instruction-time school, Language 10 is worth five credits and is therefore, given 5x35 or 175 minutes of time each week. In one type of small high school, —the 1(a)—Language 10 may be given for 5x21 or 105 minutes a week; this represents a 40 per cent loss in instruction time each week.

A second device used is that of *cycling*. This means that Grades X and XI are combined each year on certain subjects (literature, language, social studies, science, physical education, health and personal development). The cycle works in a fashion similar to this:

1956-57	1957-58	1958-59
Grades X and XI	Grades X and XI	Grades X and XI
Literature 10	Literature 20	Same program
Language 10	Language 20	as for 1956-57
Social Studies 10	Social Studies 20	
Science 10	Science 20	
Health & P.D. 10		
Physical Ed. 10		
Plus electives	Plus electives	Plus electives

1. Trends in School Sizes

The following table indicates the trends that have taken place in the size of high schools in Alberta, 1945-56. Schools noted as being of one or two rooms are usually *small high schools* in the technical sense of that term. Some schools of three rooms may be *small high schools*, but it is not possible to determine from the following figures which of the three-room schools are actually *small* schools.

NUMBER OF HIGH SCHOOL ROOMS IN ALBERTA, 1944-57

	1944	1948	1952	1957
City Schools	223	325	372	538
Private Secondary Schools	72	82	81	106
Other centres, schools of				
one room	111	98	90	107
two rooms	194	172	174	152
three rooms	78	126	156	222
four or more rooms	144	238	335	451
	822	1,041	1,208	1,576

Note:

- (1) The number of one-room high schools remains fairly constant.
- (2) The number of two-room high schools is decreasing slowly.
- (3) Three-room schools (most of these are likely to be standard instruction time) have increased by almost 300 per cent.
- (4) Schools of four or more rooms have increased by over 300 per cent.
- (5) City classrooms have increased in numbers by over 200 per cent.

Figures compiled recently in the Department of Education show an absolute decline from 1954-57 in the number of pupils attending small high schools. These figures also show that in relation to the number of pupils attending standard instruction time schools, the percentage attending small schools has declined sharply.

HIGH SCHOOL PUPILS BY TYPE OF SCHOOL ATTENDED ALBERTA, 1954-57

	1954-55	1957-58
Small High School		
Number of Pupils	5,984	4,548
Percentage of Provincial Enrolment	25.5%	13.26%
Standard Instruction Time Schools		
Number of Pupils	17,480	29,753
Percentage of Provincial Enrolment	74.5%	86.74%

Standard-instruction-time schools would include composite schools, large town high schools, larger rural centralized high schools.

2. The Advantages and Disadvantages of Small High Schools

Isolated areas, strong local opinion in favor of a district school, and peculiar geographic features tend to favor the existence of small high schools. Over the years some small high schools have added teachers and become standard instruction time schools while other small high schools have sprung up to take their place.

The advantages of the small high school may be listed as follows:

1. Pupils who might otherwise leave school at the end of Grade IX are able to complete Grade X or XI. Such completion may help the student to get a better job when he comes on the labour market.
2. Small schools act as feeders to larger high schools in the area.
3. Most pupils go home each night and are thus under parental supervision. If students are at home and not in a dormitory, the expense to the parent is generally less.
4. The small school has a personal touch sometimes lacking in big schools.

The disadvantages of the small high school are as follows:

1. Pupils do not receive full instruction time per subject.
2. Small high schools do not have good staff stability. Teachers prefer to move to larger schools where they may handle fewer grades or concentrate upon fewer subjects.
3. Small schools rarely possess the facilities of larger schools such as gymnasias and libraries.
4. The program of subjects is necessarily restricted to an academic program. Thus the small high school really serves well just the university-bound student. It should be noted that when compared with the larger high school, the small high school is at a disadvantage as far as Grade XII examination results are concerned.
5. In many schools correspondence courses must be used to supplement the meagre program, although some school divisions now convey pupils to central shop and home economics facilities, thus eliminating most of the need for correspondence courses.
6. The cycling that has to be done places a student at a disadvantage if he moves during Grade X to XI to a standard instruction time school. At standard schools, timetables are usually organized so that Grade X classes have access to nothing but Grade X subjects, Grade XI's access to nothing but Grade XI subjects. A Grade X pupil from a cycled school may have been taking, among other subjects, Grade XI literature, language, social studies, science, sociology, along with Grade X mathematics. Adjustments for such pupils transferring to a standard instruction time school sometimes have to be made with the aid of correspondence courses.
7. The small high school generally offers a narrow cultural experience.

A number of the above statements are borne out in what high school inspectors have had to say in *Annual Reports* about the small high school:

1945—The small high school has become increasingly ineffective because its program is too limited and too academic to suit the needs of rural communities and of our educational ideals.

1947—It is agreed that effectiveness of instruction in the small high school is below standard.

1955—Small high schools have been greatly assisted by recent regulations permitting the cycling of certain subjects in Grades X and XI, and by the introduction of a six-course rather than a seven-course matriculation program in Grade XII.

1957—In these schools, with a few notable exceptions, the percentage of success of Grade XII students has been comparatively low. One reason for this is that the small schools have difficulty in retaining good teachers; hence stabilized instruction is becoming quite rare.

RECOMMENDATIONS

133. Because the small high school offers less than adequate high school instruction and facilities for Alberta boys and girls, several small schools should be combined wherever possible in order to secure at least one teacher per grade.
134. Recognizing that in certain isolated areas there will probably always be small high schools, school boards of such areas are urged to make living and working conditions attractive for their teachers in order to secure and hold teachers capable of giving excellent and stable service.
135. Recognizing that Grade XII examination results are generally below average in small high schools, it is recommended that the Commission investigate the possibility of having all high schools meet the requirements of standard instruction time.

THE CENTRALIZED HIGH SCHOOL

The centralized high school typically has from 100 to 300 students, offers a complete matriculation program, a reasonable selection of general electives, two years of commercial electives (bookkeeping, typewriting, shorthand) and occasionally one or two Grade XII commercial electives, and two-year industrial arts and home economics programs. Occasionally one or two courses in practical agriculture are offered. All large high schools do not necessarily offer this range of subjects.

The centralized high school is commonly found in a large town or village, and often, less now than formerly, has a student dormitory operated in conjunction with it. It draws its students from the town in which it is located and from the surrounding rural areas. Typically, the staff consists of seven to fifteen teachers including at least one full-time commercial teacher, and one or more industrial arts and home economics specialists.

As with the composite high school, students from the centralized high schools go in large numbers to universities or nurses' training schools. Others go directly to economic employment, farming, or home-making. Among the first group are those who have taken the two-year commercial program and find themselves reasonably equipped for general office work. On the other hand, the value of the limited technical offerings of such schools is to develop skills for use at home or on the farm, or to help the student choose a technical trade to follow. They do not markedly affect the length of training necessary to achieve a journeyman's status.

TYPICAL HIGH SCHOOL PROGRAMS OFFERED IN VARIOUS SIZES OF HIGH SCHOOLS IN ALBERTA, 1957-58

Grade X

In a school with one teacher, Grades IX-XI	In a school with two teachers, Grades IX-XII	In a school with ten teachers, Grades X-XII	In a Composite School of 31 teachers
Literature 20	Literature 20	Literature 10	Literature 10
Language 20	Language 20	Language 10	Language 10
Social Studies 20	Social Studies 20	Social Studies 10	Social Studies 10
Health and Pers. D. 10	Health and Pers. D. 10	Health and Pers. D. 10	Health and Pers. D. 10
Mathematics 10	Physical Ed. 10 Mathematics 10	Physical Ed. 10 Mathematics 10 Mathematics 11	Physical Ed. 10 Mathematics 10 Mathematics 11
Science 20	Science 20	Science 10	Science 10
Typewriting 10	French 20	Biology 11 Recordkeeping 10 Shorthand 10 Typewriting 10 Business Fund. 10	Biology 11 Recordkeeping 10 Shorthand 10 Typewriting 10
Woodwork 10		Woodwork 10 Automotives 10	Woodwork 10 Electricity 10 Automotives 10
Home Economics 10	Fabrics & Dress 10	Fabrics & Dress 10 Foods and Nut. 10	Arts and Crafts 10 Fab. and Dress 10 Foods and Nut. 10
	Gen. Mechanics 15	Art 10	Agriculture 10 Music 10 Art 10 Dramatics 10

TYPICAL HIGH SCHOOL PROGRAMS OFFERED IN VARIOUS SIZES OF HIGH SCHOOLS IN ALBERTA, 1957-58

Grade XI

In a school with one teacher, Grades IX-XI	In a school with two teachers, Grades IX-XII	In a school with ten teachers, Grades X-XII	In a Composite School of 31 teachers
Literature 20	Literature 20	Literature 20	Literature 20
Language 20	Language 20	Language 20	Language 20
Social Studies 20	Social Studies 20	Social Studies 20	Social Studies 20
Health and Pers. D. 10			
Mathematics 20	Mathematics 10	Mathematics 20	Mathematics 20
		Mathematics 21	Mathematics 21
Science 20	Science 20	Science 20	Science 20
	Biology 11		
French 20	French 20	French 20	French 20
		Bookkeeping 20	Bookkeeping 20
		Shorthand 20	Shorthand 20
		Typewriting 20	Typewriting 20
		Office Prac. 20	Office Practice 20
		Woodwork 21	Woodwork 20
			Metalwork 20
			Electricity 20
	Fab. and Dress 10	Fab. and Dress 20	Automotives 20
			Fab. and Dress 20
			Agriculture 20
Psychology 20		Physical Ed. 20	Agriculture 21
		Law 20	Music 20
	Gen. Mechanics 15	Psychology 20	Physical Ed. 20
			Psychology 20
			Sociology 20

TYPICAL HIGH SCHOOL PROGRAMS OFFERED IN VARIOUS SIZES OF HIGH SCHOOLS IN ALBERTA, 1957-58

Grade XII

In a school with one teacher, Grades IX-XI	In a school with two teachers, Grades IX-XII	In a school with ten teachers, Grades X-XII	In a Composite School of 31 teachers
	English 30	English 30	English 30
	Social Studies 30	Social Studies 30	Social Studies 30
	Mathematics 30	Mathematics 30	Mathematics 30
		Mathematics 31	Mathematics 31
	Chemistry 30	Chemistry 30	Chemistry 30
		Physics 30	Physics 30
		Biology 32	Biology 32
	French 30	French 30	French 30
		Bookkeeping 30	Bookkeeping 30
		Typewriting 30	Typewriting 30
			Woodwork 30
			Automotives 30
		Economics 30	Fab. and Dress 30
			Agriculture 30
			Agriculture 31
			Music 30

The preceding tables illustrate one of the chief reasons for the formation of centralized high schools. It is that they are able to offer a better high school program. In addition, the decline of rural population and the teacher shortage forced many school boards to centralize. The improvement in rural roads has facilitated centralization.

1. Advantages of Centralized High Schools

The advantages of centralized high schools may be summarized as follows:

- (a) The attraction and retention of better qualified and more experienced teachers
- (b) Improved school plant and instructional facilities
- (c) Graded instruction
- (d) Greater diversity of offerings
- (e) Stronger student study incentives because of stronger competition
- (f) More varied and better organized extra-curricular activities
- (g) More regular pupil attendance.

2. Disadvantages of Centralized High Schools

- (a) Transportation difficulties, including poor roads and lengthy bus rides for some students
- (b) The local school no longer a community centre.

In summary, it is generally agreed by Departmental officials, trustees, teachers and parents that centralization of schools has been a most valuable development. Certainly, there has been no serious attempt in the province to reverse the process and to return to the rural school. The Alberta Teachers' Association wishes to call the attention of members of the Commission to the vital role played by the School Superintendents and High School Inspectors in bringing about centralizations.

The Alberta Teachers' Association wishes to direct the Commission's attention to the fact that the Alberta Advisory Committee on Educational Research is conducting a study on transportation of pupils. It is anticipated that this research will produce valuable information about this aspect of school centralization.

COMPOSITE HIGH SCHOOLS

Provisions for high school education have been affected greatly, particularly in the larger cities, by the increasing numbers of young people attending. Some figures illustrate the trend.

HIGH SCHOOL POPULATION AND GENERAL POPULATION OF ALBERTA

	1911	1951	1957
High School Population	2,434	22,188	30,058
General Population	374,295	936,556	1,100,000*
*Estimated			

It may be seen from a glance at the above table that the increase in high school students has been out of all proportion to the increase in general population. While general population has multiplied by three times between 1911-1957, the high school population has multiplied over twelve times in the same period. All available figures indicate that this trend toward an increased high school enrolment will continue.

There are many causes for the increased high school population. Alberta birth rates, which were 21 per 1,000 in 1939, had risen to 32 per 1,000 in 1954. Infant mortality was 48 per 1,000 in 1940 but declined to 26 per 1,000 in 1954. In addition, a greater proportion of students are staying in school for more years, particularly in rural areas, where centralization has made it possible to provide high school to rural students who would otherwise have left school at the end of Grade IX. Since World War II the general economic prosperity has meant that students were not required to drop out of school to supplement family income.

It appears to be a belief of many people that the great majority of our boys and girls are educable beyond the Grade IX level. Over the last generation the high school program has been altered in such a way as to provide for a wider range of students' abilities and interests. This widening is both a result of the larger number entering high school, and a reason why more students than formerly now continue in high school. Many parents sense that in a world which is steadily becoming more and more mechanized and urbanized, the person with a high school education may have a distinct advantage over the person without this qualification. As a result, parents want their children to get a high school education, perhaps more for reasons of money and prestige than for the ideal of a liberal education.

1. Problems Created by the Increased High School Population

Regardless of the type of high school, a number of problems are inherent in the sheer increase in numbers of high school students in Alberta. School trustees are faced with the problem of providing buildings, teachers, equipment, supplies, and school busses. In divisions and counties, high school rooms are usually built as part of a centralized school, but sometimes as a separate high school or junior-senior high school. In rural areas the major problem is not the educational problem of accommodation but the local political problem of location.

The optimum size of the school plant is a problem when there are large numbers of students. Opinions vary greatly on this matter. Some authori-

ties favour a plant which accommodates 600 to 800 students while others favour from 1,000 to 1,500. However, many American high schools have over 2,000 pupils, and some Alberta high schools will surpass the 1,500 mark.

The nature of the plant with respect to curriculum is a problem. Should school boards build several academic high schools and one technical, vocational, and general high school? The Alberta Teachers' Association believes that there is no objective evidence that the efficiency of instruction of matriculation students in a composite school is reduced because these students take instruction in some classes with students in the diploma pattern. On the other hand, there appears to be no objective evidence that the efficiency of instruction of diploma students is reduced because they take instruction in some classes with matriculation students, nor that matriculation students in select academic high schools would receive a better education than they now do in composite schools.

Related to the problem of types of high school is the kind of curriculum. Some principals of composite schools feel that the present high school program and regulations were designed for smaller high schools. These principals would like the power to modify existing courses or to add courses, to alter grade placement of existing courses, and to try out new textbooks.

In rapidly growing cities, school boards have a special problem of accommodation. The general increase in Alberta's population is aggravated for the cities by a rural-urban shift. The problems of finding tracts of land, and making decisions about size and type of high school, worry city school boards.

Another problem is the range of ability of the high school population. It is said that a greater percentage of the total youth of the province now attend high school, and that a greater percentage now stay in school longer. These two facts are assumed to mean that the range of interests and abilities in our high school population is no greater than it was 40 or 50 years ago. It is possible, however, that the greater numbers in the present day high school create a false impression of this range. The interests and abilities of the 30,000 high school pupils in 1957 may have no greater variability proportionately than the corresponding variability in the 2,500 pupils in 1911. No objective evidence exists on this comparison of range of talent with that of former times, yet important curricular modifications have been made on the basis of this alleged change.

Large high schools appear to increase the duties and extra-curricular activities of the teachers: in supervising students; acting as adviser to student paper, students' union, and school clubs; sitting on school committees which have to do with student affairs; coaching sports; and supervising house-league games, all of which adds up to a tremendous total of work. A two-year study by the Edmonton High School Local of the Alberta Teachers' Association is reported in "A Survey of the Teacher Load in

Curricular, Extra-Curricular, and Professional Activities of the Edmonton Public High Schools for the year 1956-57," March, 1958. This study shows that the work week of various groups of senior high school teachers ranges from 41.4 to 54.3 hours, with an average of 47.7 hours as shown in the table reproduced here.

**AVERAGE NUMBER OF HOURS PER WEEK WORKED BY TEACHERS IN
THE EDMONTON PUBLIC HIGH SCHOOLS BY CATEGORIES
FOR THE YEAR 1956-1957**

	English Social Studies	Mathe- matics Science	Art Dramatics Music	Foreign Languages	Industrial Arts & Home Economics	Physical Education	Business Education	Others	AVERAGE FOR ALL
Classroom Time (minimum)	27.1	27.1	27.1	27.1	27.1	27.1	27.1	27.1	27.1
Preparation of Subjects and Tests	7.6	7.5	2.8	3.5	5.1	4.5	3.2	5.9	5.9
Marking Assignments and Tests	12.9	8.0	4.8	9.1	2.6	2.4	8.4	5.2	7.7
Clerical Tasks	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Supervisory Duties	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Professional In-Service	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
Extra-curricular Activities of Students	2.1	2.1	2.1	2.1	2.1	5.7	2.1	2.1	2.4
Average Hourly Work Week	54.3	49.3	41.4	46.4	41.5	44.3	45.4	44.9	47.7

2. Advantages and Disadvantages of Composite High Schools

Nine composite high schools are in operation in the province. Some of these are: Victoria Composite in Edmonton, Western Canada Composite in Calgary, Lindsay Thurber Composite in Red Deer, Lethbridge Collegiate, and Alexandra High School in Medicine Hat. The August, 1956 *Curriculum Newsletter* describes a composite school as follows:

Although the word has no legal definition, the term **composite** is generally applied to a large high school which offers a full matriculation program, and in addition, commercial and technical courses up to and including the Grade XII level. A girl who graduates in the commercial pattern is equipped to enter an office immediately as a stenographer or junior bookkeeper. A boy who has taken three years in a technical field may expect to receive credit for one year of apprenticeship in trades designated by the Apprenticeship Board of the Department of Industries and Labour. And of course a student in the general program can choose courses from a much wider range than can the boy or girl who attends a smaller school.

Composite school enrolments range from about 700 to 1,600 students, and teaching staff ranges from about 30 to 50 teachers.

Some of the advantages and disadvantages of composite schools are primarily linked to their large size rather than to their composite nature. For example, school boards can justify special facilities because of the large enrolment. A typical composite high school might include: a central library with a professional librarian, special lunch rooms (possibly combined with the study-rooms), science demonstration rooms with tiers, special chemistry laboratories, special physics laboratories, special biology lecture and laboratory combinations, art room, drama room, music room, band room with instruments, typewriting rooms, business machine rooms, industrial arts accommodation, home economics accommodation, an adequate stage, adequate accommodation for gymnasium-auditorium with a stage, and with adequate dressing rooms, offices for counsellors and administrators and teachers, staff rooms and staff common rooms, medical rooms and services, public address system, intercommunication telephones. It is obvious that trustees could not provide these facilities for each of many smaller high schools.

Because of the size of composite schools, there is a greater specialization in instructional, administrative and counselling personnel, as well as in secretarial assistance. The routine administration of the office of a large school takes little more time than that required for a smaller school; therefore time is available for clerical assistance to teachers. Routine matters can be delegated to assistant principals, thus releasing the principal for consultation with teachers, principals of other schools, and the school's superintendent. The teachers with superior training and an adequate background of experience can specialize in the area of instruction in which they have a preference. This results in better instruction. Newer teachers coming on staff have fewer subjects to prepare and teach; this allows them to adjust more readily to the difficult job of teaching at the high school level. Large schools provide unlimited scope for any administrator to use initiative, and this combined with the opportunities for larger salaries and prestige may attract administrators of superior competence and training. The size of the school justifies the appointment of three or even four administrators. Further, the size may justify a reasonable amount of administrative time being allocated to administrative appointees. In smaller schools there are too many "administrators" who are not provided time during the normal working day to carry out administrative responsibilities; they and their classes suffer. Finally, the large composite school provides a situation in which a student, unsuccessful in one pattern, can very easily switch to another.

In the composite high school, the large school population permits a greater flexibility in scheduling programs. The choices of options results in relatively homogenous grouping of students which may further be extended by those administrators believing in the advantages of this arrangement.

A few larger schools have subject co-ordinators or department heads for key subjects (e.g. English, science). These people receive time off from regular teaching duties; in some instances they receive extra pay. They are subject-matter specialists who assist the principal and city supervisors in the improvement of instruction within a school. The department head position provides some attraction for good teachers to stay in the senior high school rather than to go to administrative positions in lower grades. The department head may be of particular help to new teachers and substitute teachers. In Edmonton the department heads are now meeting on a city wide basis to discuss experiments, instruction, textbooks and evaluation.

The real advantage of the larger school lies in the variety of programs the school can offer. In addition to this academic advantage there is a related social one: companions from junior high school, or companions from any one neighbourhood, may continue to attend the same school. Their general programs may be quite different, but they may take some subjects together and participate in certain school activities together. The composite school, then, is really various schools within a school. It does not permit, as the older system of separate academic, technical and commercial schools in cities did, the arbitrary and unfair classification of pupils according to whether or not they attended "first" or "second" class schools.

One of the disadvantages of large schools which is shared by the composite school is in recruiting and retaining teachers. In large schools, the high school teacher sees so many pupils that his work may become depersonalized. Some teachers see as many as 200 pupils in classes each day. At noon they supervise hundreds of others in corridors, lunchrooms, and elsewhere. It is becoming increasingly difficult to persuade teachers to carry out these extra duties. No employer in industry would expect to use the lunch-hour of an employee without paying for overtime. While it is true that in all professions the members may, under certain circumstances, perform special services without pay, these services are not performed at stated times under direction from the employer. It should also be noted that there are large numbers of teachers, who in the interests of teaching efficiency and health, should be excused from noon-hour supervision in large schools.

Ambitious teachers in composite schools quickly note that there is not much opportunity for advancement to administrative positions. A number of outstanding high school teachers leave the high school each year to take positions in junior high schools or elementary schools, because these, being smaller, have a higher proportion of principals and vice-principals to teaching staff than do composite schools. The Alberta Teachers' Association believes that this difficulty can partially be met by creating more curricular and extra-curricular supervisory positions in large schools.

In composite schools, the very size may hinder the development of such feelings as belonging, loyalty, and school spirit. These feelings are hard to develop in both students and staff in a school of 800-1,600 pupils. The very size or arrangement of the school plant is often confusing to the newcomer.

Thus a special effort needs to be made by the administration to acquaint newcomers with school facilities, programs and regulations. This effort involves such activities as these:

1. The principal visits junior high schools from which the large school draws pupils to acquaint pupils with what the senior high school offers
2. The staff must acquaint as many parents as possible with the school
3. The school must produce a school handbook for the orientation of incoming pupils
4. The school has to develop a good program of extra-curricular activities
5. The new teacher needs to be carefully and sympathetically inducted by teachers who are well acquainted with the school.

It is likely that no program of induction, guidance, or extra-curricular activities will ever give teachers and pupils the relationships possible in smaller high schools. This lack needs to be balanced against the better program possible in a large school. It is apparent that teachers and principals in composite schools will always have to make an extra effort to overcome the problems posed by the size of the composite school.

In large schools there are relatively fewer opportunities for students to play in inter-scholastic competition, or to hold office in key student positions. This makes more complex the task of developing character and leadership.

Since large composite schools are relatively new to Alberta, few persons have had much experience with such institutions. There are committees in Calgary and Edmonton dealing with special problems of the composite school; there are also regular meetings of principals and vice-principals in these cities. In the province a group of people meet twice a year to discuss "The Composite School Project." This project involves city superintendents, four high school inspectors, and the principals of the province's composite high schools. The project members have just begun to define and attack certain problems common to composite schools. It is felt, however, that apart from the Composite School Project and the triennial visits of the high school inspectors to city schools, there is relatively little assistance for composite schools from the Department of Education. Recently, the University's Faculty of Education has started a major study of composite schools.

RECOMMENDATIONS

136. An Alberta study should be made of the optimum and maximum size for a high school, since it may be that the two figures will not coincide.
137. In view of the size and complexity of composite high schools, a re-study should be made by the Department of Education of the matter of local autonomy in relation to provincial control.

138. Consideration should be given to the establishment of one or more academic high schools in cities in which composite schools now exist with a view to a study of the effect of segregated schooling as compared with composite schooling on academic performance.
139. In view of the size, complexity, and importance of composite schools, school boards should enable principals of composite schools to visit other large schools in this province and elsewhere to discuss mutual problems and find out how other large schools operate.
140. A study should be made of the professional personnel and administrative problems created by noon-hour supervision.
141. In order to improve teacher retention and school efficiency, additional curricular and extra-curricular supervisory positions should be established.
142. A study of drop-outs in composite schools should be made, with special reference to those who possess matriculant ability but do not complete high school, to those in the non-matriculation program, and to the adequacy of the guidance received. This would help to ascertain the reasons why these pupils do not complete school and the steps the school could take to increase its holding power.
143. A detailed study of the predictive powers of the Grade IX examinations should be made, covering the relation of reading, ability, and achievement scores to Grade X success and success in subsequent grades and the relation of these scores to size and type of school the pupil attended in Grade IX.
144. Once the conclusions from the study requested in Recommendation 143 are determined, consideration should be given to reporting Grade IX results in a manner which will give pupils and parents more information on which to base the pupil's high school program.
145. In order to reduce the difficulties and confusion occasioned by Grade XII students repeating courses, there should be an extension of Summer School facilities for Grade XII study of the kind now provided at the Lindsay Thurber Composite School in Red Deer.
146. The Government and school authorities should subsidize attendance at Summer School for those pupils in attendance at small high schools who are unable to take six matriculation subjects in one year through classroom instruction, or to secure Mathematics 31 or French 31.
147. Mathematics 31 and French 31 should be added to the curriculum of the Red Deer Summer School.
148. A careful study of the curriculum and examinations in English and Social Studies should be made in order to determine whether:

- (1) A differentiated curriculum should be introduced for matriculants and non-matriculants
- (2) The same terminal examination, and the same scaling should be used for the above two groups
- (3) An examination relatively free of textbook or courses of study could be prepared and standardized in order to permit comparisons from province to province and within Alberta over the years.

2. Junior Colleges in the United States

Not until recently has the junior college received much attention in Alberta. Consequently, it comes almost as a surprise to discover that the junior college represents an established movement in the United States. The first junior college in the United States was opened in 1892, and in the past ten or fifteen years there has been a tremendous increase in their number. At first an experiment was made with four-year junior colleges which took in high school grades, but this scheme was abandoned. Now junior colleges in the United States are typically two-year institutions. These are called either junior colleges or community colleges.

The junior college, which has become a catch-all for all post-secondary education, tends to co-ordinate and pattern formerly diverse trends. Former private schools, business schools, and church-supported colleges now form one wing of the junior college movement in the United States. The larger wing is the public junior college. All junior colleges offer transfer courses to be credited at universities, terminal courses in vocational and technical fields, and courses of both these types in evening classes for cultural, vocational, or recreational purposes. Where the two-year college serves local areas in all phases of education for which there is a demand, the term "community college" is preferred to "junior college".

The curriculum of junior colleges includes university transfer courses, but many colleges have developed vocational specialties in terminal courses almost to the exclusion of transfer work. For example, in Rochester, Minnesota, there is an outstandingly large program in medical, clerical, and secretarial work. The junior college in Belleville, Illinois, specializes in nursing training and related occupations. Many states which lack an institution such as Alberta's Institute of Technology and Art make up this deficiency through junior colleges with specialties which vary from agriculture to electronics. Almost all junior colleges offer extensive work in the commercial field in some specialized line in accordance with community requirements.

Junior colleges in the United States offering transfer courses are affiliated with their universities. To prevent variation in course content and material, a very close control was kept by the universities for a number of years. At present control is not so great, but close liaison is continued. Where at first examinations were set by the universities, the different state associations of junior colleges have now set standards which are maintained by a joint university and junior college committee on Accreditation.

CHAPTER 10

JUNIOR COLLEGE, TECHNICAL, AND VOCATIONAL EDUCATION

JUNIOR COLLEGES

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There is considerable uniformity in staff requirements for transfer courses. The general requirement is a master's degree in the subject of instruction without necessarily requiring a teaching certificate. However, in most states the junior colleges developed from high schools, so that in the beginning their instructors held teaching certificates. The American Association of Junior Colleges recommended in March, 1958, that at least eight semester hours of instruction in professional teacher education be required.

The pattern of qualifications for terminal courses is not so rigid, but usually a specialist in the field serves as instructor. In most instances he is a teacher with a commercial or industrial speciality. The high standards set for instructors makes it difficult to obtain suitable staff. In fields in which industry attracts specialists the problem often becomes critical.

2. The Finance and Administration of Junior Colleges in the United States

Raising money for operation is often the biggest problem of the public junior colleges. The haphazard origin of junior colleges has preceded legislation which would grant them secure sources of financial support. Illustrative of the complexities are the Utah junior colleges, which were taken over by the State from the Mormon church and consequently are entirely state supported. This is in contrast with Bismark, North Dakota, which recently opened a city junior college as part of the city education system. Generally speaking, large cities such as Grand Rapids, with a population of 177,000, have found a city system quite satisfactory, but smaller cities such as Muskegon, Michigan, with a population of 48,000, found that the surrounding country had to be included before the operation was economically sound. Figures from Michigan show that out of an average cost per student of \$465, state aid accounts for \$190, student fees for \$132 and the balance of \$143 was borne by the operating district. In Michigan, fees vary from zero to \$237. There is a definite trend in all junior colleges to limit out-of-state and other non-residents by imposing higher fees.

The organization and administration for most districts outside city school systems is a locally elected board for the whole area. The administrative head of a junior college is usually called dean or president, and only rarely principal. Admission to junior colleges is regulated by a battery of tests and shuts out all the college cannot accommodate. However, it is estimated that approximately 50 per cent of all who continue to higher education attend junior colleges.

3. Junior Colleges in Alberta

In 1957-58 there was one junior college in operation in Alberta, at Lethbridge. Alberta has attempted to profit from the extensive experience of the United States which has been reviewed above. The Lethbridge junior college offers transfer, terminal, and evening division courses. The transfer courses covered the first year of the Bachelor of Education and Bachelor

of Arts and Science degrees. Thus a student might complete a preparatory year in pre-medical, pre-dental, pre-law, and the general arts and science studies. Day terminal courses include a special medical-dental secretarial course and a course in automotives. The evening division offered a wide program on metal, wood, electric and motor courses; typing, business machines, and bookkeeping; matriculation for adults; and English for non-English speaking residents. In addition, courses were sponsored in conjunction with the Extension Department of the University of Alberta in psychology, Spanish, investments, law, and music. Courses of a different nature were provided for insurance and credit men. The total number in all courses was 600.

In transfer courses the University of Alberta maintains control over the syllabus, textbooks, and examinations. The University requires that instructors have at least a master's degree in the subject of instruction. The only pension fund available for instructors is the Teachers' Retirement Fund. To qualify for this a person must be a certificated teacher. This arrangement does not preclude the use of non-certificated instructors on a part-time basis, but they would not be able to qualify for pension benefits.

Alberta has a three-year general university program, Grade XII being considered the first year of the traditional four-year college program. Thus junior colleges in Alberta seem destined to being one-year colleges and to losing the sense of continuity possible in a two-year institution.

It is well known that it is predicted that university enrolment will double by 1965. The Alberta Teachers' Association believes that increased accommodation for this increased enrolment can best be provided by some decentralization of the facilities of higher education. It is of benefit to the individual and to society for more of our people to continue with their education. In this connection, the combination of transfer, terminal, and evening courses provides an admirable offering in higher education.

The organization and administration of the Lethbridge junior college includes Lethbridge School District No. 51, and seven surrounding school divisions, with the Lethbridge school district assuming charge of administration for the first five years. The college was housed in the Lethbridge Collegiate Institute with provision for the use of laboratory facilities. Some difficulties arise because of the difference in work week, with university instructors having a five and one-half day week; and because of the differences in term. University courses continue over Easter with the exception of Good Friday, but terminate in April.

RECOMMENDATIONS

149. Junior colleges should be established in centres distant from the University of Alberta where circumstances warrant them.

150. The syllabus of junior colleges should include transfer, terminal, and evening courses with special emphasis on these latter two.

151. With respect to junior college transfer courses, the closest liaison should be maintained with the University of Alberta.
152. All members of the teaching staff of the junior colleges should be certificated teachers and members of the Alberta Teachers' Association.

TECHNICAL EDUCATION

Supplementary memorandum number seven makes clear distinctions among industrial arts, technical education, and vocational education. In Alberta there is no clear decision as to whether high school courses are industrial-vocational or industrial-arts in intent; that is, vocational or general education. Course enrolment cannot be used to decide the trend of student preference since it is affected by the divergent demands of industry, the increasing effectiveness of the Alberta Apprenticeship training program, by the changing role of the Institute of Technology, by fluctuating economic conditions, and by other factors.

The general aim of education in secondary schools is the development of good citizens. This involves the development of the pupil as a responsible member of society and as an independent individual. The pre-vocational objectives of secondary education as generally accepted are:

- (a) To develop a recognition of the dignity and worth of work
- (b) To provide an introduction to the rules, laws and processes of industrial and business life
- (c) To develop good work habits, accuracy, thoroughness and co-operation
- (d) To develop basic saleable skills, having in mind the range of local vocational opportunities.

RECOMMENDATIONS

153. A study should be made of the vocational effectiveness of the present high school program.
154. The composite school shop program should be studied to determine the role of this program in the light of student needs.
155. There should be a committee appointed to investigate and clarify the vocational preparation objectives of the high school in terms of the program of Alberta schools.

VOCATIONAL AGRICULTURAL EDUCATION

Supplementary memorandum number eight relates the history of Alberta's experiences in vocational agriculture, and describes programs in other places. In Alberta there has been a long history of two different governmental departments having an interest and direct participation in

this field. The Alberta Teachers' Association recognizes the contribution which has been made to the farm life of the province by the Schools of Agriculture. Their contribution to rural life in terms of the practical vocational and social experience of their students has been invaluable. Unfortunately, the schools of agriculture have not had large enrolments and the per pupil cost has been high.

The Alberta Teachers' Association is most concerned with the provision for vocational agriculture in schools which are under the jurisdiction of the Department of Education.

The Fifty-second Annual Report of the Department of Education, 1957, indicates on page 45 that in 1956-57, 19 schools offered Agriculture 10, 2 schools offered Agriculture 20, and one school offered Agriculture 21. On page 137, the enrolments are given as follows: Agriculture 10: 374, Agriculture 20: 20, Agriculture 21: 8, Agriculture 30: 1, and Agriculture 31: 2. Consistent with the Association's belief in the value of a diversified high school program, the Association supports the extension of vocational agriculture.

RECOMMENDATIONS

156. A careful study should be made of the experiences of other provinces in developing and maintaining programs of vocational agriculture in high schools with a view to applying the most promising practices to the extension and strengthening of the Alberta program.
157. Courses in vocational agriculture in Alberta should be extended to more schools, in so far as the need, staff, and facilities are available.

CHAPTER 11

RESEARCH IN EDUCATION

Education is of vital importance to every citizen of Alberta, yet little authoritative information is available concerning the efficiency of our schools. How effective are our methods of teaching? Are children learning less or more than they did twenty-five years ago? Are standards rising or falling? How desirable are our comparisons with other states? Is educational opportunity lower in rural areas? Are teachers more effective after four years of training than they were when they had a one-year course in the normal school? Are children less able to use geometric analysis in reading today? Is it true that our children cannot spell? Are our children actually inferior in arithmetic? The truth is that we do not know complete answers to these and many more questions because we have not recognized that educational research alone can furnish these answers, and we have failed to establish and finance a sound research program.

Business and industry have expended millions of dollars in research annually, and their research programs have repaid them richly. We spend hundreds of millions yearly on defense research. Yet in such a vital field as education, the need for research is being realized and relatively little has been accomplished.

PART V

CHAPTER 11. RESEARCH IN EDUCATION

Who is to sponsor and conduct research? Departments of education do conduct research, but they are not independent, because a government department is subject to the whims of the government and research findings which would place their educational efforts in a poor light. Teachers' and trustees' organizations, too, may be suspected of self-interest, and therefore do not aspire to independent sponsorship of research. Research should be conducted by independent, impartial and highly trained staffs with such facilities as adequate libraries, clerical and secretarial assistance, machines for computation, card punching, sorting and verifying, and larger scientific process computers in the hands of trained operators. Research findings must be published, if they are to be read, understood, and put to use. Finally, educational research must be adequately financed if it is to meet the needs of the educational institutions of a large and rapidly growing province. Nothing discourages research more than operating on a strictly limited budget with inadequate facilities, materials and assistance.

1. Existing Research Organizations and Facilities

Alberta has pioneered in the field of educational research. In 1948 the University, the Department of Education, the Alberta School Trustees' Association, the Alberta Teachers' Association, and the Alberta Federation of Home and School Associations joined in the formation of the Alberta Advisory Committee on Educational Research which now sponsors the research program in this province. They recognized early that the University possessed a large group of highly trained research workers, in the

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Business and industry have invested millions of dollars in research annually, and their research programs have repaid them richly. We spend hundreds of millions yearly on defence research. Yet in such a vital field as education, the need for research is only now being realized and relatively little has been accomplished.

Who is to sponsor and conduct research? Departments of education do conduct some investigations into educational problems, but, because a government represents a political party, they could not release research findings which would place their educational efforts in a poor light. Teachers' and trustees' organizations, too, may be suspected of self-interest, and therefore do not aspire to independent sponsorship of research. Research should be conducted by independent, impartial and highly trained staffs with such facilities as adequate libraries, clerical and secretarial assistants, machines for computation, card punching, sorting and verifying, and larger multiple process computers, in the hands of trained operators. Research findings must be published, if they are to be read, understood, and put to use. Finally, educational research must be adequately financed if it is to meet the needs of the educational institutions of a large and rapidly growing province. Nothing discourages research more than operating on a strictly limited budget with inadequate facilities, materials and assistance.

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staff of the Faculty of Education. The University libraries housed a large collection of books and journals needed for research. Graduate students were available to act as research assistants. In addition the President and Board of Governors authorized the Bursar to become banker of the young research organization, and encouraged the University Press to publish *The Alberta Journal of Educational Research*.

At first funds were contributed by the University, the Department of Education, the Alberta School Trustees' Association, and the Alberta Teachers' Association, supplemented by a few grants from friends in business and industry. In 1956 the Carnegie Corporation of New York reviewed the progress which had been made, found it worthy, and awarded \$50,000 to the University for the strengthening of the research program and the provision of Canada-wide scholarships for graduate studies and research in Alberta.

The research program in Alberta is still in its infancy. To its credit, however, must be listed the following studies which have made a definite contribution to our knowledge of the efficiency of our educational program:

1. Achievement in Reading in Various Types of Alberta Schools
2. Achievement in Language and Spelling in Alberta Schools
3. Achievement in Arithmetic in Alberta Schools
4. Why Teachers Quit Teaching
5. Individual Differences in Intelligence and Achievement in Alberta Schools
6. The Influence of Time Spent in School Vans Upon Pupil Attendance and Achievement
7. The Causes of Drop-Outs
8. Promotion Practices and Policies in Alberta Schools
9. Reading Achievement in Edmonton Schools
10. Financial Assistance Available for Graduate Study in the Field of Education at Canadian Universities
11. A Study of Written Compositions of Alberta Pupils
12. A Study of the Effects of Retardation and Promotion on Under-achievers.

Currently, a major study is in progress in connection with the vocabulary, spelling and language of Canadian children. The Committee is assisting in an important study of selection of university matriculants. A survey of factors affecting pupil progress is now under way in an Alberta school division.

The status of educational research in Alberta is demonstrated by recognition in two internationally famous journals. R. W. B. Jackson, in an article "Educational Research in Countries Other Than the United States of America - Canada" published in the February, 1957, *Review of*

Educational Research, Vol. XXVII, No. 1, received fifteen reports of Alberta research published in *The Alberta Journal of Educational Research*. W. S. Gray, in an article "Summary of Reading Investigations July 1, 1955, to June 30, 1956", published in *The Alberta Journal of Educational Research* of February, 1957, reviewed three studies of reading conducted by Alberta research workers. This recognition of Alberta research is gratifying.

2. Limitations in Facilities and Equipment

While a good start has been made in educational research it has been done under conditions of great difficulty. There was, naturally, a period in which experience and "know-how" were gained, and an increasing number of people became interested in the research program. This was to be expected. There are, however, certain difficulties which have their origin in a lack of wide acceptance of the need for a research program.

- (a) **Lack of Funds**—At no time has the financing of research been adequate. Experience has indicated our requirements in the way of staff, assistants and machines. The need will be made clear in the remaining sections. This criticism is general. The Alberta Advisory Committee on Educational Research recognizes the contributions of University, Department, Trustees' Association, and Teachers' Association, and those from school boards and teachers' locals. The point being made is that the funds available do not begin to permit the volume of research for which the need is urgent and immediate, nor the machines and staff which are required to process the data with economy and speed.
- (b) **Lack of Staff**—While the direction of the research organization may well continue within the Faculty of Education, it is highly desirable that a staff of machine operators, secretaries, librarians and statisticians, under a manager or director, be secured. Provision should also be made for a part or full-time project director for each major study.
- (c) **Lack of Machines**—The University has furnished small computers, and an LPG30 unit. These facilities are valuable, but needed in addition is exclusive use of an IBM card punch, a card sorter and verifier, and eventually an IBM 650. Such facilities are required for the efficient processing of data.
- (d) **Lack of a Research Library**—Certain journals and reference works are used daily by research workers. A small but important library of such materials must be immediately available if efficient work is to be possible. The resources of the University Library are not adequate to meet the need, because such materials are in general use.
- (e) **Lack of Space**—At present research is conducted in an overcrowded building, bursting at the seams with the increasing numbers of under-graduate and graduate students. There is much to be said

for a relatively small building on the University campus which might provide offices, work rooms, filing and storage areas, and machine rooms. Alternatively, a wing of a new building with basement machine rooms would be adequate if continuous occupancy were assured.

3. The Research Program Which Will Meet the Needs of Alberta Education

Discussion of the limitations in funds, staff, machines, library and space are meaningless without a clear appreciation of the research needs of Alberta education. The Alberta Teachers' Association realizes that research workers everywhere are studying many of these problems, and that there are limitations upon what may be attempted in Alberta. The progress of knowledge is slow and halting. Cancer research is a good example. A discovery in America may lead to new developments in England, which may be further explored in Australia, finally leading to a major advance back in America. The Alberta Teachers' Association would like Alberta research to deal with two major types of problems. The first of these is problems peculiar to Alberta education; the second is problems which are universal and will engage the attention of research workers everywhere.

(a) Problems Peculiar to Alberta Education

- (i) Periodic testing of achievement of Alberta pupils in basic skills and knowledge. Testing of reading, language, spelling, arithmetic, higher mathematics, history, geography, science, according to a five year cycle, in the effort at a planned comparison of present with past achievement. A beginning has been made but research in these areas must be continued systematically.
- (ii) The development of instruments of measurement of achievement appropriate to Alberta. The development of Alberta norms for existing tests of recognized quality is an immediate need. Where new tests are required they should be developed.
- (iii) The investigation of the effectiveness of certain aspects of curriculum in Alberta. Problems arise out of the Alberta Course of Studies: the use of courses in general science, as opposed to the early separation of physics, chemistry and biology, or social studies, as opposed to history, geography and civics, or the grade placement of subject matter as in mathematics and science.
- (iv) A study of the effectiveness of certain methods used in Alberta. Is the enterprise an effective educational practice? Does group process equal or excel teacher presentation or recitation?
- (v) Drop-outs from Alberta schools. Why do potential matriculants leave school? How may able "school leavers" be retained?

- (vi) The influence of the community on education. The influence of isolation, or proximity to large centres, ethnic stocks, socio-economic factors, communal and religious differences on educational development. The sociological study of typical Alberta communities is overdue.
- (vii) Equality of educational opportunity in terms of finance, buildings, equipment, teachers.
- (viii) The small high school and its efficiency. Should such schools be continued? Is there an optimum size?
- (ix) The composite high school. What should it offer? What is the purpose of the various programs offered? What happens to its students? Is the school meeting their needs?
- (x) The identification and provision for handicapped children in Alberta. Where are they? What is being done for them? What should be done for them?

(b) Problems of Universal Importance

- (i) Optimal grade placement of subject matter. Are the school programs in Alberta too easy and have they been "watered down"? Should the content of our programs be downgraded or upgraded?
- (ii) The effectiveness of certain classroom procedures and activities. The comparison of the effectiveness of activities, group processes, different types of classroom leadership.
- (iii) Problems relating to under-achievement. Who are the under-achievers? What percentage are in this group, what may be done to assist them?
- (iv) The gifted child. Should the schools accelerate, segregate or enrich? Schools must try out the various procedures under experimental conditions, if the answers are to be discovered.
- (v) Provision for individual differences. Should our schools develop a system of streaming, with matriculation, high school diploma, and pre-vocational routes? Should Alberta copy Britain with compulsory streaming, Australia with permissive streaming through examinations and guidance, or just reduce class size and increase individual attention?
- (vi) The study of juvenile delinquency. What causes delinquent behaviour? What factors seem to attend delinquent behaviour? How may casual factors be controlled? How may our schools cope with delinquency?
- (vii) Motivation and educational effort. Educational goals, externally conceived and imposed, or co-operatively developed. The role of group process in motivation. Competition.

- (viii) An experiment in teacher-education. A study of the effectiveness of changes in teacher education programs. The study of apprenticeship and internship procedures. Teacher selection. Should teacher education be general with more cultural emphasis, or specific, anticipating the requirements of the position?
- (ix) The nature and function of evaluation in our schools. What are our needs in the field of evaluation? Can our schools be provided with an abundance of service tests in the major subjects? Can our schools have made available to them, at reasonable prices, the world-famous testing instruments? Are our schools measuring all the outcomes of education that should be measured?

RECOMMENDATIONS

- 158. Educational research in Alberta should be under the overall direction of the Alberta Advisory Committee on Educational Research, and the immediate direction of the Faculty of Education Committee on Educational Research.
- 159. Adequate space in an existing building on the University campus or in a new building should be provided to house the research organization, staff, secretaries, and research assistants required for research in education.
- 160. Funds should be made available to finance the regular operations of a research program in education, including salaries of permanent officials, machine operators, research assistants, and project directors, and including funds for travel to provincial conferences and national research meetings.
- 161. Adequate staff should be provided for research in education, including a manager, secretaries, a librarian, machine operators, and research assistants.
- 162. Machines such as card punch, sorters, verifiers, and eventually an I.B.M. 650 type computer, should be provided for data processing and analyzing.
- 163. A research library should be provided as a ready source of reference for workers in educational research.
- 164. The publication of research results should be at two levels:
 - (a) A scholarly level illustrated by *The Alberta Journal of Educational Research* and *Alberta Monographs on Educational Research*
 - (b) A layman's level illustrated by the *Alberta Newsletter on Educational Research* and the *Alberta Review of Educational Research*.

CHAPTER 12

SUMMARY OF RECOMMENDATIONS

For the convenience of members of the Alberta Royal Commission on Education, 1958, all of the recommendations presented in the Alberta Teachers' Association brief are summarized below. The Association has made every effort to have each recommendation an independent unit, but recognizes that this conflicts with brevity. It is respectfully submitted to the members of the Commission that the context of the recommendations is found in the brief proper, and that interpretations of recommendations are to be made in the light of the context there presented. For the further convenience of members of the Commission, the aspects of education dealt with by the various recommendations are inserted as headings.

RECOMMENDATIONS SUBMITTED BY THE ALBERTA TEACHERS' ASSOCIATION TO THE ALBERTA ROYAL COMMISSION ON EDUCATION, EDMONTON, ALBERTA, APRIL, 1958

Recommendations with respect to the general aims of education:

PART VI

1. The Commission should establish a body of setting up a representative body, with membership similar to that of the present General Curriculum Committee, to advise the Minister of Education.

CHAPTER 12. SUMMARY OF RECOMMENDATIONS

Recommendations with respect to education in modern society:

2. A Social Science Division of the Alberta Research Council should be created to undertake basic research and continuing scholarship in the social science fields with special reference to Alberta.
3. Educational administrators should have some background in social sciences and those in control of large systems should have access to expert advice in the social sciences.
4. The educational system should eliminate possible economic barriers to continued schooling.
5. The educational system should overcome cultural inequalities in student backgrounds, in so far as this is possible.
6. The school's program should be diversified.
7. The school should promote a critical understanding of the occupational structure.
8. The educational system should stress the importance and value to the individual and to society of a wide range of occupations to counteract youth's tendency to place high values on a limited number of occupations.

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RECOMMENDATIONS SUBMITTED BY THE ALBERTA TEACHERS' ASSOCIATION TO THE ALBERTA ROYAL COMMISSION ON EDUCATION, EDMONTON, ALBERTA, APRIL, 1958.

Recommendation with respect to determining the aims of education.

1. The Commission should study the advisability of setting up a representative body, with membership similar to that of the present General Curriculum Committee, to advise the Minister of Education concerning the aims and objectives of education.

Recommendations with respect to education in modern society.

2. A Social Science Division of the Alberta Research Council should be created to undertake basic research and continuing scholarship in the social science fields with special reference to Alberta.
3. Educational administrators should have some background in social sciences and those in control of large systems should have access to expert advice in the social sciences.
4. The educational system should eliminate possible economic barriers to continued schooling.
5. The educational system should overcome cultural inequalities in student backgrounds, in so far as this is possible.
6. The school's program should be diversified.
7. The school should promote a critical understanding of the occupational structure.
8. The educational system should stress the importance and value to the individual and to society of a wide range of occupations to counteract youth's tendency to place high values on a limited number of occupations.

9. The school should extend individual and vocational guidance in co-operation, where feasible, with community facilities.
10. The educational system, in co-operation with government, business, and industry, should provide vocational - training programs.
11. The educational system, in co-operation with government, business, and industry should encourage and facilitate work experience for pupils in schools.

Recommendations with respect to determining the need for teachers.

12. A continuing study of the drop-out rate for the teaching profession in Alberta should be made.
13. Periodic estimates of the need for teachers to staff Alberta's schools should be made.
14. Data should be gathered and reported in such a way that the number of years of teacher education of persons staffing Alberta's schools is shown.
15. Periodic calculations of present, and estimates of future sources of supply of teachers should be made.

Recommendations with respect to high standards for certification.

16. The high-standards approach should be adopted by all the responsible authorities as policy with respect to staffing Alberta's schools.
17. A continuing study of the relationship between length of training and retention of teachers should be made.

Recommendations with respect to admission requirements for teacher education.

18. The entrance requirements to the Bachelor of Education degree program should be maintained on a parity with those required in other faculties of the University of Alberta.
19. The entrance requirements to the Junior Elementary program should be raised immediately to matriculation level making admission requirements to the Junior Elementary and the Bachelor of Education programs the same.
20. A continual selection and guidance procedure should be adopted prior to and during the teacher-education program of candidates for certification, with consideration being given to some or all of the following devices in addition to academic standing: estimates of moral and emotional stability, a health examination, a speech test, principal or counsellor personal-inventory, the results of an interview by a board which should include a competent teacher, and performance in student teaching.

Recommendations with respect to facilities and programs for teacher education.

21. The Alberta Teachers' Association asks that the Commission recognize and commend the willingness of the University of Alberta to expand staff, facilities, and space of the Faculty of Education.
22. In order that the quality of teacher education, graduate studies, and research may be maintained and strengthened, the Association urges that the Commission recommend that the University of Alberta continue to provide sympathetic and prompt action with respect to the needs of the Faculty of Education.
23. The Association further recommends that the growing needs of the Faculty of Education in Calgary with respect to staff, buildings, and equipment should be recognized.
24. The Association endorses the four-year Bachelor of Education program as the most desirable form of teacher education and recommends that as soon as possible degree programs be established as the sole basis of teacher education and certification in Alberta.
25. The facilities for higher education, including Junior Colleges, should be extended.

Recommendations with respect to initial certification of teachers.

26. The Province of Alberta should move toward a basic four-year period, which includes a college or university degree, for initial general certification of teachers for the elementary and secondary schools of Alberta.
27. As an intermediary step between certification as in 1958 and the requirement of a basic four-year period of teacher education, the Province of Alberta should return immediately to two years of teacher education as the minimum for permanent certification.
28. General certification should be basic to teaching in our elementary and secondary schools, and placement of teachers in specialized positions should be governed by the nature of their preparation rather than by special certification.
29. Special certificates should eventually be withdrawn in favour of a single general teaching certificate as recommended in number 26 above.

Recommendations with respect to the distribution of teachers.

30. Teachers must have freedom of choice of urban-rural location and grade level in Alberta's school system.
31. The salary of teachers should be determined by qualifications and experience; however, isolation bonuses might be paid to teachers in remote locations.

32. In areas and at grade levels where school boards are experiencing difficulty in staffing Alberta's schools, the boards should examine the conditions of work with a view to making them more attractive to teachers.

Recommendations with respect to recruitment of teachers.

33. The school systems of the Province should endeavour to increase the supply of high school graduates through guidance services, through remedial action based on drop-out studies, and through a wide and varied high school curriculum.
34. Efforts should be made to increase the proportion of men entering the teaching profession.
35. Information about teaching as a career should be readily available for any interested young person.
36. Policy on scholarships and bursaries should be adopted to encourage candidates to take four years of teacher education.

Recommendations with respect to retention of teachers.

37. Salaries of teachers should be made comparable to those of other professions with similar training, especially with respect to maximum salaries.
38. Teachers, principals, and vice-principals should have continuous contracts.
39. A school board should have the right to terminate a contract with a teacher, principal or vice-principal by giving thirty days' notice at any time during the year, except July and August, to be subject to appeal to the Board of Reference.
40. A teacher, principal or vice-principal should have the right to resign:
 - (a) By giving thirty days' notice between June 1 and July 31, to take effect in July or August
 - (b) By giving thirty days' notice at any other time during the year, such notice of termination to be subject to appeal to the board of reference by the school board.
41. All proposed transfers of teachers not mutually agreed upon should be subject to appeal to a committee of the school board and the local teachers' association, or to a neutral body, where evidence is given under oath and subject to cross-examination. School boards should contribute to pension and health benefits for their teachers.

Recommendation with respect to financing education.

42. Any system of school administration should provide for:
 - (a) Elected school boards

- (b) Fiscally independent school boards
- (c) Equalization grants
- (d) Direct grants to school boards.

Recommendations with respect to the elementary school curriculum.

- 43. Studies should be made to determine the best grade placement of the subject-matter of the elementary school curriculum.
- 44. Studies should be continued to determine the value of various methods for dealing with individual differences, including multi-rate promotion, grouping, and enrichment.
- 45. Studies should be made to determine the efficiency of various teaching techniques including the enterprise.

Recommendations with respect to the junior high school curriculum.

- 46. The organization of the junior high school should be studied with a view to determining whether its best work is done as an independent unit, as an upward extension of the elementary school, or in association with the high school.
- 47. A study should be made of the curriculum of the junior high school to determine its adequacy to meet the wide range of individual differences in capacity and interest among its students.
- 48. School systems, through principals and guidance services, should use the results of the grade 9 examinations in guiding students along educational and vocational paths most suited to their abilities, interests, and needs.

Recommendations with respect to the high school curriculum.

- 49. Any evaluation of the high school curriculum should be made only after a study of and statement of the function of the high school in Alberta society has been completed.

Recommendations with respect to the efficiency of teaching.

- 50. Studies should be made of the professional preparation of the teaching force in 1928, 1938, 1948 and 1958 as a basis for determining trends.
- 51. Studies should be made of the relationship of teacher education and experience to success in teaching, in specific areas of the school organization (elementary, junior high, and high school) and in teaching particular subjects (mathematics, English, French, and so on).
- 52. The various pedagogical procedures which can be used in the classroom should be evaluated in terms of the purposes which they are intended to serve.

Recommendations with respect to the organization, administration, and supervision of instruction.

53. The present 3-3-3 grade organization should be retained in the Alberta School System.
54. A brochure or manual should be prepared under leadership of the Department of Education to give guidance to school boards with respect to good school administration practices, and outline the areas of administration in which teachers may well be involved for the general benefit of education.
55. Inquiries should be made into the merits and demerits of properly qualified superintendents being employed by and responsible to local school boards.
56. The school boards in the smaller urban districts and in the rural school divisions and the Department of Education should be asked to increase the supervisory staff in accordance with need.

Recommendations with respect to textbooks.

57. Textbooks which contain the essentials of each subject should be made available.
58. Alberta has reached the stage in its development where textbooks should reflect our culture.
59. More attention should be given to Commonwealth books.
60. The adequate supply of reference books in every school should be a major consideration of school boards.

Recommendations with respect to school libraries.

61. The Department of Education should authorize and encourage the use of a uniform book classification for the assistance of school libraries throughout the Province.
62. In elementary schools of over 200 pupils, and in all high schools, adequate central library facilities should be required in all new schools. This space, without "study purposes" limitations, should qualify for at least the standard classroom grant.
63. Up-to-date information regarding central school library requirements and facilities should be issued to school boards for their guidance. The Faculty of Education should keep the need for school librarians under constant review so that school library courses may be offered as required.
64. Books listed in the catalogues of The School Book Branch should be classified for the use of school librarians.
65. Additional government grants should be paid to accredited school libraries which have met basic standards.

Recommendations with respect to audio-visual aids in teaching.

66. Instruction in the use of audio-visual materials should be available to teachers as part of their pre-service professional preparation, and should be strengthened and kept up-to-date through continuous in-service education.
67. Steps should be taken to ascertain whether or not the present quota system is unduly restricting the legitimate use of films as classroom teaching aids. If such is found to be the case, then consideration should be given to the provision of more films.
68. There should be established in Alberta an adequately powered educational station to serve as the primary, and perhaps only, outlet for educational broadcasts of all types.
69. There should be further study and experimentation with respect to the classroom use of television before this medium is introduced in any large scale in Alberta schools.

Recommendations with respect to optional age of school entrance.

70. School systems should add pre-primary rooms to the elementary school with the dual roles of giving basic kindergarten training to those who are less ready for formal reading, and a readiness program for the children who are ready for it. Children in an advanced state of readiness should be considered for promotion to grade one at once; in some systems promotion to grade one in January might be arranged, but for those least ready, a full year of kindergarten skills and readiness skills would be provided.
71. The Faculty of Education should be requested to provide a special program covering course work, observation, practice teaching, and tests and measurements in order to prepare teachers who have marked professional competence in kindergarten and pre-primary work, and with a broad insight into the work of the primary grades.
72. Regardless of the presence or absence of pre-primary rooms, school systems should encourage grouping within the classroom in grade one and subsequent grades in order to adjust the level of instruction to the readiness of pupils.
73. School systems should reduce the size of classes in grade one and subsequent grades wherever possible in order to permit more individualized instruction.

Recommendations with respect to acceleration and retardation of pupils.

74. Differences in student achievement should be dealt with by measures such as small classes, grouping, remedial work, individualized instruction, and moderate acceleration rather than by widespread failing of low achievers.
75. Other factors such as physical, mental, emotional, and social development should be considered along with school achievement in determining acceleration or retardation.

76. Administration convenience, as when a high failure rate evens out the enrolment in rooms, should never be allowed to determine the acceleration and retardation of pupils.

Recommendations with respect to standardized tests of achievement.

77. A committee on evaluation should be established, including teachers and "tests and measures" personnel from the Faculty of Education, whose functions would be:
- (a) To determine subjects where existing tests can be used
 - (b) To determine subjects where existing tests, with modification, can be used
 - (c) To determine subjects where new tests are required.
78. Each large school system should have on its staff an expert in tests and measurement to assist in the construction, normalization, use, and interpretation of tests.
79. Standard tests should be used primarily as a basis for remedial work, and in making broad judgments about a pupil, class or school, keeping in mind that the objectives of the curriculum are broader than the objectives measured by available standardized tests.

Recommendations with respect to the retention of pupils in school.

80. A study should be made of the records currently available in the Department of Education tracing the retention of samples of Grade IX students through subsequent grades, paying particular attention to intelligence, urban-rural location of students, and type of high school attended, in order to use the more exact data thus obtained for better planning for retention.
81. A study should be made as above to determine the proportion of passes by intelligence for each grade level for each type of high school program as an aid to planning curriculum and to guiding students.
82. All schools, especially junior and senior high schools, should attempt to hold all students as long as they are profiting from public education. Efforts to hold only the bright students may not work because of strong social pressures from their age mates.
83. All schools, especially junior and senior high schools, should study their own drop-outs with reference to the factors which are associated with dropping out of school, and with a view to determining causes of drop-outs and initiating remedial action.
84. In order to encourage students to continue in school, each school system should be prepared to offer a variety of high school courses consistent with its resources.

85. In order to reveal "shake-down" practices which encourage students to drop subjects or to drop out of school, the evaluation of the per cent of students passing departmental examinations should be in terms of the number who originally enrolled in these courses rather than in terms of the number who wrote the examinations.
86. Each school system should seek to improve the quality of instruction, especially in the high schools. In-service education in Alberta affects high school teachers much less than it does elementary school teachers. It is obvious that first-rate instruction tends to retain students in school.

Recommendations with respect to departmental examinations.

87. Until more effective means of evaluation and prediction are found and proven, the Department of Education should continue its examinations in Grade IX and XII as presently organized and administered.
88. Efforts should be made to improve the validity, reliability, objectivity, and comparability of the Grade IX and Grade XII examinations.
89. The ratings of Grade IX and Grade XII departmental examinations should continue to be made by the application of statistical criteria, but these criteria should be continuously scrutinized and modified where advisable. Such modifications should consider:
 - (1) The extent to which standards of achievement remain consistent over a period of years
 - (2) The degree to which departmental examination standings serve as a basis of selection of students for admission to the various faculties of the university
 - (3) The degree to which competent students may, by the present method of determining standings, be excluded from advanced training in academic and technical institutions
 - (4) The degree to which departmental examination standings serve the needs of those high school students who will not likely achieve matriculation standing or who do not plan, for one reason or another, to attend university.
90. A study should be made of the merits and demerits of accreditation as compared with province-wide examinations as the means of determining the basis of high school graduation and university admission.

Recommendation with respect to standards for post-high school education.

91. A continuing study of matriculation requirements should be made by a competent research staff under the direction of the Matriculation Study Committee of the Joint Committee to Co-Ordinate High School and University Curricula, including within its consideration both academic and non-academic types of data on students, and differential admission requirements.

Recommendations with respect to guidance and counselling.

92. A thorough study of the extent, nature, and quality of present guidance services in the province should be made.
93. School boards and their administrative officers should adopt a policy of selecting for guidance positions, teachers with suitable personal qualities, and should encourage them to secure further education.
94. The Faculty of Education should offer laboratory-type courses in the techniques of guidance more frequently in summer sessions.
95. The Faculty of Education, in consultation with other agencies, should develop and offer a training course for "visiting teachers".
96. School boards and their administrative officers should provide good working conditions for school counsellors, with respect to time and load, offices and equipment, and secretarial help.
97. School boards should require, when possible, special training in guidance of their counsellors and other guidance personnel.
98. School boards should not overlook school counsellors as a source of administrative personnel.
99. The training for school counsellors should be recognized within the regular salary schedule provisions.
100. The extension of guidance services to centralized schools beyond the cities is an urgent matter requiring co-operative efforts of school boards, administrative officers, and the Department of Education. The teacher shortage should not be used as an excuse for no action, because effective guidance would tend to reduce the teacher shortage by improving holding power of schools, and thus increase the pool of matriculants.
101. Further professional education for counsellors should be provided through the Evening Credit Program of the University of Alberta.
102. In-service education of school counsellors should be encouraged.
103. In school systems large enough to warrant this service, visiting teachers and school psychologists should be provided to assist the classroom teacher, especially in the elementary schools, in the performance of their guidance functions.

Recommendations with respect to provisions for gifted children.

104. Early and continuous efforts should be directed toward the identification of the gifted children in all grades of our schools.
105. Acceleration not exceeding two years in twelve should be considered for the gifted when they are physically, socially, and emotionally advanced for their years.

106. Acceleration of the gifted should not be accomplished by grade-skipping.
107. Special classes for all or part of the school day should be tried out by large school systems to determine the reaction of parents, teachers, press and public. An enriched curriculum, multiple rooms at each grade level, teachers interested in a program for the gifted, and the requisite equipment, library, textbooks, and other facilities must all be present for the fair trial of special classes for the gifted.
108. Local or provincial committees should plan and publish enriched curricula for the gifted at the various grade levels.
109. Planned enrichment for gifted children in ordinary classrooms should be investigated.
110. Small classes which permit individual attention and adequately trained teachers should be used in conjunction with the other measures recommended for gifted children.

Recommendations with respect to provisions for mentally retarded children.

111. Teachers of special classes for the mentally retarded should have a four-year degree program leading to general certification plus additional courses in the field of special education.
112. Interprovincial co-operation among the western provinces in the education of teachers in the field of special education should be explored at the governmental level.
113. The identification of mentally retarded children should be made as early as possible.
114. Provision of special opportunity classes should be made in all systems large enough to warrant such classes.
115. Opportunity rooms should be located within a regular school, and the children should take part in as many school activities as possible: assemblies, films, and sports.
116. In systems large enough to warrant this, a differentiated program for boys and girls of low mentality, leading toward vocational as well as academic objectives, should be initiated about age thirteen.

Recommendations with respect to school health services.

117. In systems large enough to warrant this, the school health service should be directed by a medical officer, post graduate trained in public health.
118. Nurses in the school health service should be trained in public health.
119. A suitable office should be provided in each large school served by a school health service.

120. In large systems, additional services should include a dental officer, psychiatrist, and consultant.

Recommendations with respect to "hidden costs" to high school students.

121. A series of studies, perhaps starting with each of the province's composite schools, should be made to determine the "hidden costs", both school-imposed and extra-curricular.
122. In connection with a study of Alberta drop-outs in various schools, one item to investigate would be the financial factor. An effort to determine the effect of scholarships, bursaries, and loans on high ability drop-outs should be made.
123. The above studies should be co-operative, involving administration, faculty, students, and parents.
124. School boards should determine policy on hidden costs for their system.
125. Hidden costs should be reduced by measures such as:
- (a) An "all activities" ticket
 - (b) A school-operated supplies store
 - (c) A close scrutiny by the administration of costs of materials and supplies for certain courses, such as art, industrial art, physical education
 - (d) Textbook rentals
 - (e) Close control by student council of the costs of student activities
 - (f) Careful review of graduation costs with a view to reduction.
126. The effect of scholarships, bursaries, and loans to high school students, where used in other places, should be studied. This would determine the wisdom of using these measures in Alberta and the methods to adopt.

Recommendations with respect to school buildings and facilities.

127. Studies should be initiated by the Department of Education to determine the adequacy and suitability of facilities and the utilization of plant and equipment, with consideration being given to these studies being done under the direction of the Alberta Advisory Committee on Education Research or by graduate students in the Division of Administration in the Faculty of Education.
128. The Department of Education should set up regulations requiring school boards to advise and consult with members of teaching staffs who are to use new buildings.
129. The Department of Education should set up certain minimum requirements for school buildings and the facilities to be included therein, basing these requirements on the study suggested in 127.

130. The Department of Education should continue to encourage school boards to replace inadequate and outdated school buildings and facilities by further increasing provincial grants for capital expenditure.

Recommendations with respect to the semester system of school organization.

131. Because the four schools operating on the semester plan are providing a valuable service to many students of the Province, the semester plan should be continued in these schools and the Department of Education should adapt its examination system to the needs of these schools.
132. A study should be made of the semester, especially with respect to optimal length of class instruction period, the relative merits of two terms over three terms, the pupil retention of subject matter and university success of students taught by the semester plan.

Recommendations with respect to small high schools.

133. Because the small high school offers less than adequate high school instruction and facilities for Alberta boys and girls, several small schools should be combined wherever possible in order to secure at least one teacher per grade.
134. Recognizing that in certain isolated areas there will probably always be small high schools, school boards of such areas are urged to make living and working conditions attractive for their teachers in order to attract and hold teachers capable of giving excellent and stable service.
135. Recognizing that Grade XII examination results are generally below average in small high schools, it is recommended that the Commission investigate the possibility of having all high schools meet instructional time standards.

Recommendations with respect to large high schools.

136. An Alberta study should be made of the optimum size and maximum size for a high school, since it may be that the two figures will not coincide.
137. In view of the size and complexity of composite high schools, a re-study should be made by the Department of Education of the matter of local autonomy in relation to provincial control.
138. Consideration should be given to the establishment of one or more academic high schools in cities in which composite schools now exist with a view to a study of the effect of segregated schooling as compared with composite schooling on academic performance.
139. In view of the size, complexity, and importance of composite schools, school boards should enable principals of composite schools to visit

other large schools in this province and elsewhere to discuss mutual problems and find out how other large schools operate.

140. A study should be made of the professional personnel and administrative problems created by noon-hour supervision.
141. In order to improve teacher-retention and school efficiency, additional curricular and extra-curricular supervisory positions should be established.
142. A study of drop-outs in composite schools should be made, with special reference to those who possess matriculant ability but do not complete high school, to those in the non-matriculation program, and to the adequacy of the guidance received. This would help to ascertain the reasons why these pupils do not complete school and the steps the school could take to increase its holding power.
143. A detailed study of the predictive powers of the Grade IX examinations should be made, covering: relations of reading, ability and grades, and the relation of these scores to size and type of school grades and the relation of these scores to size and type of school the pupil attended in Grade IX.
144. Once the conclusions from the study requested in Recommendation 143 are determined, consideration should be given to reporting Grade IX results in a manner which will give pupils and parents more information on which to base the pupil's high school program.
145. In order to reduce the difficulties and confusion occasioned by Grade XII students repeating courses, there should be an extension of Summer School facilities for Grade XII study of the kind now provided at the Lindsay Thurber Composite School in Red Deer.
146. The Government and school authorities should subsidize attendance at Summer School for those pupils in attendance at small high schools who are unable to take six matriculation subjects in one year through classroom instruction, or to secure Mathematics 31 or French 31.
147. Mathematics 31 and French 31 should be added to the curriculum of the Red Deer Summer School.
148. A careful study of the curriculum and examinations in English and Social Studies should be made in order to determine whether:
 - (1) A differentiated curriculum should be introduced for matriculants and non-matriculants
 - (2) The same terminal examination, and the same scaling should be used for the above two groups
 - (3) An examination relatively free of textbook or courses of study could be prepared and standardized in order to permit comparisons from province to province and within Alberta over the years.

Recommendations with respect to junior colleges.

149. Junior colleges should be established in centres distant from the University of Alberta where circumstances warrant them.
150. The syllabus of junior colleges should include transfer, terminal, and evening courses with special emphasis on these latter two.
151. With respect to junior college transfer courses, the close liaison should be maintained with the University of Alberta.
152. All members of the teaching staff of the junior colleges should be certificated teachers and members of the Alberta Teachers' Association.

Recommendations with respect to technical education.

153. A study should be made of the vocational effectiveness of the present high school program.
154. The composite school shop program should be studied to determine the role of this program in the light of student needs.
155. There should be a committee appointed to investigate and clarify the vocational preparation objectives of the high school in terms of the program of Alberta schools.

Recommendations with respect to vocational education.

156. A careful study should be made of the experiences of other provinces in developing and maintaining programs of vocational agriculture in high schools with a view to applying the most promising practices to the extension and strengthening of the Alberta program.
157. Courses in vocational agriculture in Alberta should be extended to more schools, in so far as the need, staff, and facilities are available.

Recommendations with respect to research in education.

158. Educational research in Alberta should be under the over-all direction of the Alberta Advisory Committee on Educational Research and the immediate direction of the Faculty of Education Committee on Education Research.
159. Adequate space in an existing building on the University campus or in a new building should be provided to house the research organization, staff, secretaries, and research assistants required for research in education.
160. Funds should be made available to finance the regular operations of a research program in education, including salaries of permanent officials, machine operators, research assistants, and project directors, and including funds for travel to provincial conferences and national research meetings.

161. Adequate staff should be provided for research in education, including a manager, secretaries, a librarian, machine operators, and research assistants.
162. Machines such as card punch, sorters, and verifiers, eventually leading up to the I.B.M. 650 variety should be provided for data processing and analyzing.
163. A research library should be provided as a ready source of reference for workers in educational research.
164. The publication of research results should be at two levels:
 - (a) A scholarly level illustrated by *The Alberta Journal of Educational Research* and *Alberta Monographs on Educational Research*.
 - (b) A layman's level illustrated by *The Alberta Newsletter on Educational Research* and *The Alberta Review of Educational Research*.

SCHOOL TEXTBOOKS

The textbook has had a profound influence on the education of the children of Alberta. It has been the means of transmitting the curriculum from generation to generation of study. It is not surprising and only too true that the outline of the chapters to be studied. There were many limitations to such an approach to education in our schools. At present, the teacher contributed much to the learning. The primary school is presented with pages of the text by the textbook company. Many assignments were made to the teacher to be completed during the next class period. Teaching the textbook has become a more tedious task of the classroom teacher. The teacher is often asked to get forth by the textbook company.

PART VII

SUPPLEMENTARY MEMORANDA

The supplementary memoranda included in part seven represent the views of individuals on the topics discussed. The Alberta Teachers' Association thinks that these memoranda are valuable contributions, but the views of the Association are contained in the Brief proper and in the recommendations.

1. School Textbooks
2. School Library Service
3. Audio-Visual Aids to Teaching
4. The Optimal Age of School Entrance
5. School Health Services
6. Financial Aid to High School Pupils
7. Technical and Vocational Training in High Schools
8. Vocational Agriculture at the Secondary School Level

There are certain advantages worthy of note. It may be expected, especially in the early years, that a well-organized presentation of the subject matter is given by the textbook. It may be expected that the textbook will be written by the hands of individual pupils. These textbooks are available. Hence, there is the danger of the intelligent use of textbooks. Where the text is inadequate, it must be reinforced by other sources of knowledge such as reference books, field trips, and audio-visual aids.

The teacher with inadequate teacher education can do a better job of teaching when relying on a textbook than when forced to select from and organize the material of many references. While less than 50 per cent of Alberta's teachers currently holding a University degree, this is an important consideration.

SUPPLEMENTARY MEMORANDUM NUMBER 1

SCHOOL TEXTBOOKS

The textbook has had a profound influence on the education of the children of Alberta. It has been the means of implementing the curriculum, since the time when the course of study, in any particular subject, was an outline of the chapters to be studied. There were many limitations to such an approach to education in our schools. At worst, the teacher constituted himself a task-master who merely divided the prescribed pages of the text by the number of instructional periods available. Daily assignments were made and the results of the pupils' study were examined during the next class period. Teaching could, under such conditions, become a mere recitation of the indiscriminate selection of items of information as set forth by the author(s) of the textbook.

The above abuse of the textbook brought it into unwarranted disrepute. In the hands of capable teachers, the textbook has provided an organization of subject matter which has been used effectively as the core of the subject being taught. Reference material has been used to offset the limitations inherent in any one textbook which can only presume to meet the general demands of any school subject. Supplementary books, current magazines and other sources of information make a course up-to-date and of vital interest to a class.

THE VALUE OF TEXTBOOKS

The intelligent use of textbooks has certain advantages worthy of note. Minimum requirements are possible and can be expected, especially in the senior high school. A good textbook contains a well-organized presentation of the most valuable information available on a given topic. The textbook is a great timesaver for both pupils and teachers.

Inevitably a single textbook will have certain limitations: it may present too much or too little information on certain aspects of the subject; it may set forth a certain point of view to the detriment of other sides of controversial questions; it may be retained too long and so become out-of-date; it may well be unsuited to the needs of individual pupils. These limitations are irrefutable. Hence, there is the need for the intelligent use of textbooks. Where the text is inadequate, it must be reinforced by other sources of knowledge such as reference books, field trips, and audio-visual aids.

The teacher with inadequate teacher education can do a better job of teaching when relying on a textbook than when forced to select from and organize the material of many references. With less than 30 per cent of Alberta's teachers currently holding a University degree, this is an important consideration.

Many of the problems facing education in Alberta today lie in sound theory quite unrealistically applied. For example, we are committed to the many-book approach throughout our school system. This is an excellent idea, but not if books are not available in the particular school in which one is to teach. School boards set the allocation for library books and references at ridiculously low figures. With today's expensive books this means that far too few are available to the pupils. The inexperienced teacher may then fall back on textbooks, if these are authorized. The more experienced teacher, in schools with more adequate provision of reference books, need not rely solely on the text.

STANDARDS FOR SELECTING TEXTBOOKS

1. Adaptability

- (a) Supervision—should be self-directive
- (b) Teaching—suited to a variety of approaches
- (c) Children—adapted to the needs and ability of children and can be related to the community
- (d) Class—suited to classes of varying size
- (e) Equipment—meets the requirements of a modestly equipped classroom
- (f) Term—has sufficient material with additional reference material indicated; such reference material to be available where possible.

2. Subject Matter—What is the character of it?

- (a) Related to Child Experience—interests the pupil; builds upon original tendencies; allows growth
- (b) Aims—in harmony with the general aims of the education program
- (c) Provides for Individual Differences—sufficient breadth to be useful to the class
- (d) Selection and Balance—amount given to a topic; selection of essential topics; repetition of vital facts; elimination of unnecessary repetition, especially in a series of books
- (e) Moral-Civic Values—supports the ideals in conduct and action
- (f) Reliability—facts are accurate and up-to-date
- (g) Style—language and organization suitable for the class.

3. Arrangement and Organization

- (a) Divisions—divided carefully into units, chapters, sections and paragraphs with appropriate bold face type etc.
- (b) Project Method—material topically grouped.

4. Aids to Instruction and Study

- (a) Usableness—questions through provoking and relevant; suggestions for study; purposeful plan of activity
- (b) Provision for Choice—variety, interest, and difficulty
- (c) Index—adequate; a list of difficult words; pronunciation aids
- (d) Glossary
- (e) Contents—sufficiently complete table to make location of material a simple matter.

5. Mechanical Features

- (a) Attractiveness—color suitable, not easily soiled; harmonious; convenient size
- (b) Illustrations, Maps, Charts—interesting, useful, full of action
- (c) Print—proper size for the grade
Height—At least 1.5 mm, thickness 0.25-0.3 mm; between letters 0.5-0.75 mm; within letters 0.3-0.5 mm; between words 2 mm; between lines 2.5 mm
- (d) Binding—durable and flexible, not easily broken
- (e) Paper—good weight and good quality; surface unguazed.

6. Special Features

- (a) Authorship—an authority
- (b) Publisher—reliable, good reputation
- (c) Preface—of real use; gives plan of the book
- (d) Date—revised or reproduced in the last five years.

The use of adequate basic textbooks does not preclude the learning that pupils acquire in searching for material or information. Such learning can be achieved around the basic text. Searching for and organizing information should not be the fundamental aim of education to the point where pupils are so busy searching that they have little time left to learn.

SUPPLEMENTARY MEMORANDUM NUMBER 2

SCHOOL LIBRARY SERVICES

There is a real need for school libraries in the Province because no textbooks can contain sufficient information on the multiplicity of subjects in which students today can be expected to have interest. Knowledge is rapidly expanding in many directions, therefore the schools must keep their sources of information up-to-date or be considered by the students as being behind the times.

A school library is by definition a room designated as a central library, sufficiently spacious to seat at least the largest class. The book resources are organized on a recognized library system of classification. The staff of school libraries will vary tremendously but should have, at best, a fully trained librarian with teaching qualifications. Other less attractive alternatives will include (a) a part time librarian, (b) a teacher with part time responsibility for the library.

The advantages of a central library system are many, some of which are set out below :

1. The total book collection is made available to all the pupils and staff
2. The book collection is most likely to be balanced, because in reviewing the inventory teachers are able to notice the weaknesses in various fields
3. Individual differences in capacity and reading ability are more easily met when pupils have the full range of the library from which to choose
4. An enrichment program for gifted pupils is supplemented by having a wide range of books
5. The central library can provide materials for study at different levels in the many phases of the work involved in projects in science, English literature, and social studies.

Research reported in "*Research Newsletter*, No. 7, November 1957, Alberta Committee on Educational Research, University of Alberta," reveals that the reading range of 787 Grade VII pupils in Alberta was from 4.5 to 10.8, a spread of 6.3 grades. The average range for ten urban classrooms was 5.0 grades. These findings are supported by research elsewhere in Canada and in the United States. There can be no doubt that emphasis must be placed upon an adequate supply of reading at varying levels of interest and difficulty.

The central library is an essential tool in modern education to teach children from an early age to use a library effectively. Such skills are

¹Research Newsletter, No. 1, November 1957, Alberta Committee on Education Research, University of Alberta.

needed throughout the twelve years of school and on into adult life. Too few of our adult population make use of the public libraries in the province, because they have never learned the library habit. They have had little opportunity in Alberta schools to learn what a good library can mean to learning.

To make the central library the heart of a school requires a qualified librarian, or at least a teacher who has knowledge of a library's effective operation. Such a person should be interested in children and have a genuine knowledge of children's requirements. The classification of the central library's book collection should be serviced with a card catalogue system so that pupils may find books by author, title or subject.

In 1946 Saskatchewan set up a system for the organization of school libraries throughout the province with particular attention being given to a library list as a guide for cataloguing the books, and to information to assist in the purchase of suitable books. Standard listing of school books is of immense help in arranging for well organized libraries in the schools.

SCHOOL LIBRARIES IN ALBERTA

Alberta has taken little interest in the organization of central school libraries. The Department of Education has no legislation specifically aimed at organizing school libraries. In 1957 the Department of Education did arrange for a School Library Sub-Committee under the Curriculum Committee. So far this committee has held two meetings, therefore its contribution to school library services is yet to be felt.

A bulletin, *Suggestions for the Guidance of School Boards and Architects*, revised to June, 1957, has this brief offering regarding school libraries. "The library may adjoin a regular classroom separated by a glazed partition. An interconnecting door should be provided between library and adjoining classroom." This is rather meagre advice to offer school boards and architects in the matter of school libraries.

The lack of library construction as an integral part of school construction is rather alarming during a period of unprecedented school building. This situation means that for the life expectancy of the buildings presently being constructed the students concerned will be deprived of the benefits that a good central school library can give unless these buildings are modified.

It would seem that school boards are not actively encouraged to build central school libraries, either by grants or by technical advice from the Department of Education. The shortage of teachers is a deterrent to placing qualified teachers in the schools as part time librarians. The above factors appear to have prevented Alberta schools from having adequate central library facilities.

AMERICAN LIBRARY ASSOCIATION STANDARDS^e

LIBRARIAN		BOOKS AND PERIODICALS		APPROPRIATION	ROOM AND EQUIPMENT
1 full-time Librarian with college year of library training to serve from 200 to 500 pupils and 1 full-time librarian for each additional 500 pupils.		Enrol-ment	Books No. of titles	No. of volumes	Reading room: 25 sq. ft. per reader 200—largest class group plus 20
1 part-time clerical assistant to serve from 200 to 500 pupils.		200	1,700	2,000	500—seat 75 pupils
1 clerical assistant to serve from 500 to 1,000 pupils and 1 for each additional 1,000 pupils.		500	3,500	5,000	1,000—seat 100 pupils
		1,000	5,000	7,000	2,000—seat 200 pupils
		2,000	6,000	10,000	3,000—seat 300 pupils
		3,000	7,000	12,000	5,000—seat 500 pupils
		5,000	8,000	15,000	
ORGANIZATION		Periodicals Information file; audio-visual materials		Special provision must be made every 5 years for encyclopedia replacement.	Reading room to serve up to 1,000 pupils (enrolment)
Centrally organized collection of sufficient and appropriate books, other printed materials, and audio-visual aids for most effective service.		PROGRAM Reading program; guidance service; reference service; curriculum development.		1 additional reading room for each additional 1,000 pupils	
		Developed with cooperation of teachers and students.		Central library needed to serve 200 or more pupils	
		Encourages and assists in use of materials.			Workroom and storage as minimum, with conference room recommended.
		Continuing evaluation of effectiveness of service.			

^eSCHOOL LIBRARIES FOR TODAY AND TOMORROW; FUNCTION AND STANDARDS, American Library Association, 1945

SUPPLEMENTARY MEMORANDUM NUMBER 3

AUDIO-VISUAL AIDS TO TEACHING

Section I — Films

1. Effectiveness of Films as Teaching Aids

Research on the effectiveness of motion picture films has been summarized as follows by L. B. Sands in his textbook *Audio-Visual Procedures in Teaching* (Ronald Press, 1956), pages 374-375:

Educational films have been experimentally and statistically examined by many investigators since about 1918. The growing consensus of their results tends to the conclusions . . . that the judicious use of motion pictures in teaching is beneficial for developing generalizations and attitudes, that educational films enlarge the interests of pupils, that they stimulate the imagination, that they convey factual knowledge, and that they make instruction more efficient in various subjects and at various stages of education.

A summary of 163 of these investigations is reported in the 1949 Yearbook of the National Society for the Study of Education.⁷ Some of the more significant findings cited from numerous studies can be paraphrased as follows:

1. The learning of factual matter is helped by motion picture presentation because it gives the child clear-cut notions of the objects and actions in the world about him." B. D. Wood and F. N. Freeman, **Motion Pictures in the Classroom** (Boston: Houghton Mifflin Co., 1929), Reference 157.
2. In respect to retention of matter learned, "the use of the film in instruction is superior to the use of verbal material alone, or to the unorganized use of other visual aids," according to the uniform results of thirteen experiments. F. D. and H. Y. McClusky, 1926, Reference 81; Arnspiger, 1933, Reference 4; Knowlton and Tilton, 1929, Reference 68; and others.
3. Habits and skills seem to derive some improvement from the use of films in teaching, but the method is not significantly superior to the demonstration method. F. N. Freeman, L. A. Shaw, and D. E. Walker, 1942, Reference 47; and others.
4. The perception of relationships is increased by motion pictures that show the interaction of cause and effect, but historical motion pictures tend to confuse the sense of relationships in time. D. C. Knowlton and J. W. Tilton, **Motion Pictures in History Teaching** (New Haven: Yale University Press, 1929), Reference 68.
5. Students' descriptive and explanatory abilities seem to be increased by films if measured by objective tests, but not if measured by essay-type tests. Wood and Freeman, 1929, Reference 157.

⁷National Society for the Study of Education. The Forty-Eighth Yearbook, Part I: "Audio-Visual Materials of Instruction" (Chicago: Pniversity of Chicago Press, 1959), chap. xii, Research on Audio-Visual Materials," by Edgar Dale, James D. Finn, and Charles F. Hoban.

6. The ability to think is more marked in student groups that use films than in those that use only textbook matter, but in command of pure facts their superiority is less marked. P. J. Rulon, **The Sound Motion Picture in Science**, Harvard Studies in Education, Vol. XX (Cambridge: Harvard University Press, 1933), Reference 120.
7. Children's imagination is stimulated by historical films; they gain a more sympathetic insight into the lives and feelings of people of the past, a fuller and clearer conception of earlier cultures, and an increased ability to reconstruct historical scenes. F. Consitt, **The Values of Films in History Teaching** (London: G. Bell & Sons, 1933), Reference 26.
8. The variety of pupils' interests is increased by films; those who have been shown films on health are prompted to bring in more clippings and pictures and are more energetic in recitations, discussion, and voluntary reading. Knowlton and Tilton, 1928, Reference 68; Freeman and Hoefer, 1931, Reference 46. Hoban's study for the American Council in 1942 showed that students enjoy classroom motion pictures and would like to see more of them, but also that they are highly critical of films² and that their interest is affected by age, sex, economic status, cultural background, previous experience, and other such factors. Films dealing with the problems of minorities were found to be rather effective in breaking down prejudices. Older pupils were found to be more aware than younger pupils of the technical qualities of films.

2. Use of Films in Canada

STATISTICS COLLECTED BY CEA, JUNE 29, 1956.

Province	Number of 16mm. projectors owned by School Boards	Number of schools served by Dept. of Education library	No. of bookings of Dept. of Education library per year
British Columbia	552	615	
Alberta	690	700	36,000
Saskatchewan	623	600	27,617
Manitoba	400	460	10,000
Ontario	1,292	3,650	
New Brunswick	261	400	6,500
P. E. I.	41	all schools	1,400
Nova Scotia	273	543	10,368
Newfoundland	128	390	25,000

3. Film Resources in Alberta

Libraries of approved instructional motion picture films are maintained by the Audio-Visual Aids Branch of the Department of Education and by the Department of Extension, University of Alberta. Film service from the Department of Education is free, but the Department of Extension charges rental fees. For this reason schools, except those in the Ed-

²Charles F. Hoban, Jr., *Focus on Learning* (Washington, D.C.: American Council on Education, 1942), chap. vi, "Passing Judgment"; chap. iii, "Student Reactions."

monton school systems, tend to restrict their borrowings to the Department of Education library.

The Audio-Visual Aids Branch has 4,200 prints of sound films in a library comprising about 1,100 titles. It also has over 3,000 filmstrips. The Department of Extension has about 1,000 prints of sound films approved for classroom use and about an equal number of filmstrips.

In terms of the number of topics dealt with, instructional films are available for the curricular areas shown in the order listed: social studies (geography, industry, history, civics, sociology); science (elementary and more formal); health, personal development (group life, patterns of growth, personality and character); music, vocational guidance; language; physical education; home economics; art; literature.

During the last three or four years there has been a very distinct movement towards the establishment of regional and school libraries of filmstrips. It is estimated that at the present time there are about 300 school or divisional filmstrip libraries in Alberta and that there are about 30,000 filmstrips in these libraries.

The annual circulation of instructional films by the Audio-Visual Aids Branch has grown steadily since 1947 when the service was inaugurated. Circulation figures are shown below:

School Year	Total Circulation of 16mm. Films
1947-48	12,662
1948-49	19,778
1949-50	24,111
1950-51	25,298
1951-52	29,476
1952-53	34,561
1953-54	32,509
1954-55	32,321
1955-56	34,152
1956-57	35,743

It will be noticed that the circulation of films rose rapidly until 1952-53, that there was an appreciable drop in circulation in 1953-54, and that the increase in circulation since that time has been proceeding at a slower rate. These phenomena are related to the fact that in 1953 the Department established a quota system which rigorously limited the number of films schools of various sizes might borrow in a given month. Circulation figures since 1953 do not, therefore, give a true picture of the total potential demand for classroom films. While the quota system no doubt serves a useful purpose to the extent that it tends to discourage an excessive or an ill-advised use of classroom films, it may also tend to limit their legitimate use.

4. Limitations on the Effective Use of Films

Two factors seem to militate at the present time against the effective use of motion pictures in the classroom. One is the limitation in service

referred to above. The other results from the fact that many teachers are inexpert in the efficient use of the motion picture as a teaching aid. The situation is further complicated by the fact that the motion picture is very susceptible to abuse of function as a teaching aid. For this reason some teachers who, without specific training would soon learn to use motion pictures efficiently, tend to become the victims rather than the masters of the teaching film.

Section II — Radio

1. Effectiveness of Radio As a Teaching Aid

Radio seems to be most effective when it fills a specific classroom need, e.g., music in a room where the teacher has limitations in this direction, or a story from history in a school where information is lacking. Teachers find radio most effective when it is tied closely to the curriculum or to their day-to-day work, although if it is tied too closely they regard it as a master rather than a servant. Radio lessons are effective to the extent that the teacher looks upon them as part of a wider lesson application. There must be adequate preparation and follow-up.

2. School Broadcasts in Canada and the United States

School broadcasts are now heard in all of the provinces. In every provincial Department of Education there is an official appointed to supervise school broadcasting. In some cases (Ontario and two of the maritime provinces) this officer is also in charge of other audio-visual aids. Broadcasts are planned and produced on a local, regional, and national basis. Alberta, because of the existence of CKUA, provides more broadcasts to the schools than other provinces, and more broadcasts closely related to the curriculum.

The most comprehensive survey of radio in Canadian schools was made by the Canadian Teachers' Federation from 1952-1956. Of interest, too, are the reports submitted by Department of Education supervisors to the National Advisory Council on School Broadcasting of the CBC.

There is no uniformity in the pattern of school broadcasting in the United States. The only broadcasts on a national basis seem to be the Standard School Broadcasts sponsored by Standard Oil Company. For the most part these are music programs. A number of states, among them Wisconsin, Minnesota, and New York, sponsor broadcasts on a state-wide basis. Most large cities have school broadcasts departments, many of them owning their own radio stations. Many universities also have non-commercial stations, most of which co-operate with local school authorities on broadcasts to elementary and secondary schools within the signal range of the station.

Further information on school broadcasting in the United States may be obtained from the National Association of Educational Broadcasters, 14 Gregory Hall, Urbana, Illinois, or from the Association for Education by Radio and Television, 228 North LaSalle Street, Chicago 1, Illinois.

3. School Broadcasts in Alberta

For twenty weeks of the school year Alberta schools have available to them two broadcasts a day. One of these series of broadcasts is prepared in co-operation with other western provinces and presented in co-operation with the CBC and private stations on the network. The other series is prepared by the School Broadcasts Branch of the Department of Education and is presented with the co-operation of Radio Station CKUA and certain private stations which broadcast these programs from tape recordings. In addition Alberta participates in the National School Broadcasts presented each Friday afternoon for 30 weeks during the school year.

Approximately two-thirds of the classrooms in the elementary and junior high schools of Alberta are equipped to hear the broadcasts. Certain programs like *Sing and Play* may reach from 60 to 70 per cent of the children in Grades I to III. Other programs reach a comparatively small percentage of their potential.

School broadcasts cover the following curricular areas: music, drama, social studies (current affairs and community history), literature, speech, and science (chiefly natural science and conservation). The most effective programs are those in music, drama, speech, art, and stories for junior grades. These undoubtedly meet genuine needs as far as teachers are concerned. Teachers also appreciate the current events programs although the rather limited number of listeners may indicate that many do not regard them as too important or necessary.

The School Broadcasts Branch also offers a Tape Recording Service for schools. All programs in the Alberta Provincial Series, over which the Department has complete copyright control, are made available to schools wishing to use them on their own tapes.

4. Strengths and Limitations

Strengths. The real strength of school broadcasting is found in those curricular areas in which it compensates for weaknesses in classroom teaching. Music is a case in point. At the present time there are about 100,000 students in Alberta listening to the school music broadcasts. Undoubtedly, there are many classrooms in the Province where, if it were not for these broadcasts, pupils would get no regular instruction in music.

A similar situation exists in the field of speech. The School Broadcasts Branch distributes 30,000 *Speech Explorers* booklets annually. The outline of the *Speech Explorers* broadcasts for the year is now the basis of the speech training program in the schools. There is no doubt that in this field School Broadcasts will become even more important.

Art is another case in point. Through the art broadcasts, *It's Fun to Draw*, more than 20,000 boys and girls are learning about the creative aspects of art. Through a supplementary system of circulating small student art exhibits, pupils are able to see at first hand work which is an inspiration to their own efforts.

Because radio is strictly an audio medium, school broadcasts are able to play on children's imagination in areas such as literature, history and current affairs. Some teachers use the broadcasts to teach concentration with the follow-up activity, usually a recitation of the factual content of the broadcasts.

Alert teachers find many uses for the broadcasts other than their immediate, designated purposes. They are used for motivating discussions, art lessons, creative writing lessons, enterprises, research projects, and so forth.

Limitations. The most serious limitations of the broadcasts are physical. Reception is a difficulty. Poor reception is due to poor radios or to local or distant interference or to both. The situation is improving as schools install central radios or central sound systems with speaker outlets in each classroom. There are around 170 of these in the province at the present time.

Another limitation results from the times when school broadcasts are presented. In many schools they conflict with recess periods. In others there is conflict with other activities. This appears to be particularly true on Fridays. Junior and senior high schools, with their rigid timetables, experience more difficulties than elementary schools. The use of the tape recording service helps to overcome this limitation. However, it should be noted that the School Broadcasts Branch may tape-record for distribution only its own broadcasts. Those that are first aired on the CBC network are restricted by union regulations.

Another serious limitation arises from the way in which school broadcasts are sometimes used or misused. Some teachers do not try to motivate their pupils, do not bother to relate the programs to classroom work, do not precede them with activities which will make the broadcasts more vital, and do not follow them with activities which will re-inforce the points brought out by the broadcasts. This suggests that in courses in methodology for teachers-in-training the use of all audio-visual aids should be given the attention they deserve and that in this group of aids radio broadcasting should take its rightful place.

5. An Educational Station for Alberta

Ideally educational broadcasts should be presented over an educational station. The advantages of having such a station to serve as the primary and perhaps only outlet for school and other educational broadcasts in Alberta would be manifold:

- (a) Flexibility in scheduling would be possible. Broadcasts could be presented more than once during the day, giving a greater number of classrooms the opportunity to share in them. They could also be presented a week or two later for review purposes if necessary.
- (b) The number of school broadcasts could be increased considerably at small additional cost. New types of programs, such as the following could be devised:

- (i) Exchange broadcasts from Britain and Australia as well as from other parts of Canada and the United States could be presented.
 - (ii) Radio might be used more directly to assist in correspondence teaching. It certainly could not take the place of procedures now employed, but, as a supplement in certain areas at least, it could add personal warmth and direct contact where this is now lacking.
 - (iii) There could be programs of enrichment for bright children. A single student, or a group, could follow such programs. This could be managed by means of earphones or by providing special listening rooms.
- (c) In-service programs for teachers could be provided. It is not impossible to visualize large groups of teachers all over the Province listening while certain aspects of education are discussed. Such programs could expand into research projects, short courses, or even into portions of credit courses.

If there were in Alberta an educational station adequately powered and operated by a board upon which there was representation from all elements of the wider community who could make use of it, the Province would have something of great potential benefit to the whole field of education.

Section III — Television

1. Effectiveness of Television as a Teaching Aid

There is a difference of opinion as to the effectiveness of television. This has to do, not with the difference between television and no television, but with the difference between the application of television in certain curricular areas and the effectiveness of certain techniques which are part of teaching by television.

A great deal more information than is now available must be forthcoming before the effectiveness of this medium as a teaching aid can be adequately assessed.

Further information on this matter may be obtained from the Committee on Television of the American Council on Education.

2. Educational Television Programs in Canada and the United States

There is no regular television service for schools in Canada. Two experiments have been undertaken by the National Advisory Council on School Broadcasting, the most recent in the spring of 1956. Since that time there have been small experiments in Scarborough (Fall, 1957), Halifax (February, 1958), and Winnipeg (March, 1958). Although a national service has been suggested no definite action has been taken.

There are 28 educational television stations on the air in the United States. Most of these are associated with universities. Some of them are owned and operated by city school systems, others as co-operative community ventures. In addition 50 or more schools have closed-circuit television systems. In Hagerstown, Maryland, a comprehensive five year experiment is under way in closed-circuit television.

3. Television and Alberta Schools

Not enough is yet known about the advantages and disadvantages of television as a classroom teaching aid. More studies will have to be made before its proper role can be determined. In the meantime technological advances are being made which will make it less costly, more widely available, and more useful in the classroom. At the present time there would be no point in urging the immediate introduction of educational telecasts to the schools.

SUPPLEMENTARY MEMORANDUM NUMBER 4

THE OPTIMAL AGE OF SCHOOL ENTRANCE

1. Existing Practices

Otto points out, in the *Encyclopedia of Educational Research*, that the age limit for entrance into the elementary school has been based more on convenience and educational theory than on research, but that "current (American) practice is almost universal in placing age six . . . as the lower limit of the elementary school" (7). Ammons and Goodlad report that a "study of 544 urban school districts (American) revealed that 74 per cent of them set a minimum age for first grade at between five years seven months and five years ten months. The lowest minima and highest maxima reported were five years, and six years five months respectively" (1). A review of the 1956 *UNESCO Education Bulletin* reveals that such countries as Canada, Italy, Japan, Hungary, India, as well as the United States of America favour six as the age of school entrance (11). Children wait until seven years in the USSR, Netherlands, Brazil, Denmark and France. Five years is sanctioned in Bermuda and the Commonwealth countries of Australia, New Zealand, the Union of South Africa, England, Scotland and North Ireland. Local practice varies slightly in terms of the child's date of birth with the result that children frequently enter as much as four or five months in advance of the accepted legal age of entrance. This results in a child starting at five years eight months in Ottawa, Montreal and Vancouver, five years and nine months in Winnipeg, five years and ten months in Milwaukee, and four and one-half years in Melbourne, Australia. Frequently enough, too, individual school boards permit accelerated entrance where mental age is high. The problem of age of school entrance must be seen against the pattern of increasing attendance in nursery schools and kindergartens, common in continental Europe, Great Britain, Australia, the United States and Canada. On this continent the practice is not universal. In 1944, in the United States, only 702,500 pupils out of a population of 2,500,000 children of suitable age were in attendance in kindergartens (7).

2. Factors Affecting Readiness

The factors affecting or determining a child's readiness to profit from formal education are threefold: developmental progress, preschool training, and quality of educational experience encountered when he commences grade one. Developmental factors include chronological age, mental age, physiological readiness in terms of general growth and maturation, the absence of physical defects, sex, emotional stability, social development, and breadth of experience. Pre-school training refers to the effects of attendance at nursery school or kindergarten, and, especially the type of training and experience encountered there. The quality of educational experience in grade one may vary from that given by intelligent highly-trained teachers utilizing the most effective of instructional materials, with

full awareness of the subtle requirements necessitated by individual differences of the pupils, and the minimal offering of partially trained teachers.

School readiness must be seen as a complex of many factors, some closely related to the child's level of motivation, others related to his richness of experiences in the home, the community, and perhaps the kindergarten. Lack of general vitality, slowness in development of body muscles, coordination of movement, digital dexterity, visual accommodation and acuity exercise a tremendous influence upon readiness. Still more important, perhaps, is mental age. Readiness is also based on emotional stability, social adjustment, and the extent and richness of contact with the meaningful objects and experiences of a child's world. To these may or may not be added the enrichment of guided experience of the kindergarten in verbal, physical, manipulative and musical activities. Since individual differences are great, the aspirants to entrance into grade one must be expected to differ so radically in experience and maturity that no one formula of treatment nor set of requirements for admission could ever assure any required degree of homogeneity.

3. Development Factors

Anderson reports on a group of studies giving an insight into developmental factors (2). In 1931 Morphett and Washburne compared the progress of first grade pupils of different chronological and mental ages in vocabulary mastery, oral reading and general reading progress, and concluded that a mental age of six and one-half years is the optimum time at which to begin reading (2). McLaughlin reported the chief cause of failure in reading as mental immaturity (2). Thompson revealed that children who have mental ages of at least six before reading instruction is begun, like reading better and make faster progress than younger children (2). Dean indicated that a mental age of six and one-half years or better is needed to do average work in the first grade (2). The fact that many Commonwealth countries sanction beginning reading at five years warrants the inclusion of a Scottish study. C. D. Taylor compared 114 children whose average chronological age was six years and three months, who were beginning their second year of school, with the normalizing sample on which the American test used in the study was based (10).

The Scottish children varied from middle to lower class and had a mean I.Q. of 100.59. The American test was so constructed that the average child of a chronological age of six years three months would have a reading age of six years three months. The sample proved significantly superior to the American norms in readiness. In addition the mean Scottish reading age proved to be seven years five months. This would indicate that the Scottish children were superior in readiness, and at least one year in advance in reading achievement over American children of the same chronological age. This is explained, in part, by the earlier entry of Scottish children into grade one, and, perhaps, by the contention made by Inglis that beginning reading in Scotland is facilitated by a lower requirement of sight vocabulary and a more limited range of ideas (2). Incidentally

MacGregor found that at eleven years Scottish children are still five months superior to American children in reading age (6).

In the light of this evidence, reinforced by the widespread Commonwealth endorsement of entrance into the elementary school at five years, it might seem that it would be beneficial to lower the age level of entry into grade one. The Scottish viewpoint is that progress in reading is more the result of developing existing potential than a matter of awaiting the requisite degree of maturation.

Physiological readiness, too, seems to be a factor in reading readiness. Olsen found a close relationship between growth in reading and the total growth pattern of the child. Any general debility or specific defect will understandably reduce the child's readiness to profit from reading instruction (2).

Sex also influences readiness. Samuels compared a group of 100 girls and boys matched for mental age, and found a significant superiority in reading in the girl's group (2). Other investigators have found girls slightly superior in reading to boys at the grade one level.

Emotional stability also affects school readiness. Smith reports studies showing lack of emotional stability as a serious handicap to reading progress. Lack of social experience and development are injurious (2). Sanders discovered that children who failed in reading frequently played alone and avoided social contacts (2).

4. Preschool and Readiness Training

Irene Fast made a comparison of the effect of kindergarten training and no kindergarten training upon ability to learn to read, using 134 children who had spent one year in kindergarten and 46 comparable children who had not. She administered tests of readiness and reading at three different times during the school year (9).

TABLE 1
MEAN SCORES ON FOUR READING TESTS ADMINISTERED TO
KINDERGARTEN TRAINED AND NON-KINDERGARTEN TRAINED
CHILDREN EQUATED FOR I.Q. AND M.A. DURING THEIR YEAR IN
GRADE I (FAST)

Month	Test	Mean Score	
		Kindergarten	Non-Kindergarten
October	Reading Readiness	8.67	4.63
February	Word Recognition	13.71	11.83
February	Paragraph Reading	5.45	3.96
May	Paragraph Reading	13.30	9.54

This study suggests significantly superior progress in reading for the kindergarten-trained beginners over comparable children who lacked this training. This finding has been duplicated by many other students of the problem.

Ring compared the progress of children given a half year of readiness-training in grade one with that of two groups of like size, equated for chronological and mental age, who entered the regular reading program at the beginning of the year (8). The reading readiness groups mastered reading, when they were introduced to it, at a more rapid rate, and overtook the control group during the second and third years in school, with five months less reading instruction. Their teachers also noted that the readiness groups exhibited superior physical and emotional condition.

In a study of readiness testing in St. Louis, Kottmeyer reported more than one-third of 4,000 grade one pupils tested were rated as unready for systematic reading instruction at the outset of school (5). The evidence seems to suggest the value of kindergarten and readiness training in preparing children for the formal reading program. Since the traditional kindergarten program does not coincide entirely with the readiness program, this conclusion raises certain difficulties.

5. Pedagogical Training

Arthur Gates has challenged the postponement of reading instruction by demonstrating experimentally that the methods of teaching and the materials used are just as important factors as chronological and mental age (3). He concluded that "statements concerning the necessary mental age at which a pupil can be entrusted to learn to read are meaningless. The age for learning to read under one program or with the method employed by one teacher may be entirely different from that required under other circumstances." In general he proved that the mental age required for progress in reading varied sharply with the quality of teaching method and instructional materials used, and that with modern and effective instruction and suitable materials, well adjusted to individual differences, a mental age of 5.0 appears to be sufficient for beginning reading. This is in harmony with the contention of Inglis referred to earlier. Betts supports this opinion with the conclusion that reading readiness is a compound of factors; the absence of any factor or factors demands differentiation of instruction in terms of individual differences. Gates also makes the point that while it might be possible to commence reading at age 5.0 the desirability of this practice is another matter which must finally be answered in terms of its total effects on the child.

6. Summary

The variety and even contradictions in the evidence submitted are more apparent than real. A summary and synthesis follows:

1. The extent and variety of individual differences in school beginners are marked. Differences in mental age, physical vigor, strength, muscular coordination, visual control, emotional stability, social development and preschool experience and training defy all measures intended to produce homogeneity.
2. Preschool training of the kindergarten variety increases reading and school readiness where other developmental factors are favourable.

3. Reading readiness training is also advantageous for later progress in reading when other developmental factors are favourable.
4. Society desires a rational approach to this problem which will insure the optimal progress of each child, despite the admitted complexities of individual differences, and would, it is believed, prefer to see such solution within the domain of the public school system.
5. The essence of the problem is **differential treatment of children of varying degrees** of readiness calculated to bring all on to the required degree of readiness for entrance into grade one at the optimal time. This must involve recognition of the fact that some are ready at five, and some are less ready at seven.
6. In many school systems this problem is partially met by the existence of kindergarten facilities in which children are given the type of developmental experience their individual differences and varying readiness indicate as appropriate. Thus, while some receive reading readiness training which prepares them for more rapid progress in grade one, others are experiencing the ordinary activities of the kindergarten, which must be mastered before readiness training. In the process, they are at once prepared for effective work when they reach grade one, and ranked in order of readiness for formal reading activities.

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SUPPLEMENTARY MEMORANDUM NUMBER 5

SCHOOL HEALTH SERVICES

1. Basic Principles

Since children were first gathered together in considerable number for educational purposes, it became evident that our communities were presenting themselves with a special responsibility for health supervision of school children. The increased contacts resulting from grouping of children facilitated the spread of communicable disease, demanding close supervision and application of available measures for control of such diseases. Furthermore, it became evident that the child with certain physical disabilities was unable to proceed normally through our educational institutions with his own age group.

Outstanding examples of such defects are those of vision and hearing; but there are many other physical conditions which interfere with the child's progress in school. Many such disabilities are not detectable by parents in the early stages. Not infrequently this results in waste of a teacher's time and special effort with these children, and delay in the progress of the child. This situation may often be remedied or altogether prevented, by early detection of such conditions by the school health services and by encouraging parents to have prompt correction carried out. In other words, while the school health service is important to the present and future general welfare of the child, the immediate benefit to the school is the removal of those circumstances which make him a burden upon his teacher and fellow pupils.

It is suggested that such services be considered chiefly in an advisory and assisting capacity to the teacher in transmitting information regarding personal hygiene, particularly in the junior grades. Frequently have we seen the child whose health habits, such as tooth-brushing and proper bed-time, have been very sporadic under the best effort of the parents, drop firmly into line when instructed in these matters by the teacher.

2. Assumptions

Initially, it must be accepted that the prime responsibility for the health of a child rests with the parents of that child. The school health service does not substitute for parental responsibility. It must also be accepted that since adequate facilities are existent in Alberta for the treatment of all physical defects, the school health service is in no way obligated to provide routine treatment services.

It is advisable that a school health service be directed by a medical officer post graduate, trained in Public Health and possessing suitable qualifications in this field. This course offers training in school health and administration. Similarly, nurses where possible should be public health trained.

The objective of School Health Services is the promotion of the highest possible standard of physical, mental and social health in children of school age. To achieve this a pattern of activities has been evolved over the years directed at:

- (a) modification of the environment of the school child, and
- (b) detection and direction to treatment of the defective child.

BASIC MINIMAL SCHEDULE OF SCHOOL HEALTH ACTIVITIES

1. General Measures Applied on a School Community Basis

i. **Environmental Hygiene:** sanitation of schools. Special attention to heating, lighting, air space and ventilation. Water supplies and sewage disposal. Regular inspection of schools and school yards by a trained sanitary inspector.

ii. **Communicable Disease Control:**

(a) Class examinations following vacations and on suspicion of infectious conditions existent in pupils; exclusion of discovered cases; these functions to be performed by school health nurses

(b) Immunization offered to all pupils, on an annual or biennial basis for diphtheria, tetanus, smallpox and poliomyelitis; these functions to be performed by physicians, or by nurses trained and certified by the Provincial Health Department as public vaccinator

(c) Community-wide notification of communicable disease to local Health Departments, specifically under the Communicable Disease regulations by householder, teacher or physician; application of quarantine and isolation where indicated by the regulation by the local health authority.

iii. **Visual Surveying of Pupils** by home-room teachers and referral of suspected illness to a school nurse.

iv. **Screening by Survey:** Experience has proven that in any group of children, certain types of defects are extremely common. In such cases it is economical to set up a special technique directed at detecting one type of defect only. Such techniques must be easily applied, and consume little time:

(a) Survey of visual ability

(b) Survey of hearing ability

(c) Survey of physical growth.

v. **Health Education** (excluding health counselling): The classroom talk of the school nurse is becoming a rarity except when given in connection with a particular problem. The school nurse, however, is well placed to act as a reservoir of resources and information for the teacher who is qualified and trained to give a course in health.

2. Specific Measures Directed at the Individual

i. Clinical Services

(a) Nurses

- (1) Examination of grades not examined by medical officers annually
- (2) Conferences with teachers on children suspected by either of being defective
- (3) Re-examination of children known to be defective, as frequently as indicated by the nature of the defect
- (4) Referral of cases beyond the facilities of the nurse to the medical officer for examination.

(b) Medical Officers

- (1) Annual examination of Grades I, VII, and X or XII. Grade XII is preferable as this is the last grade in school and recommendation regarding future employment, etc., could be made. However, the Grade XII curriculum appears to be so heavy that this is impractical
- (2) Examination of referred cases from the nurse
- (3) Re-examinations
- (4) Examinations of handicapped children
- (5) Examination prior to competitive sports.

In all cases found to be defective, the parents should be notified and requested to place the case under the treatment of the family physician. In a number of cases in the school health service an absolute diagnosis is often impossible—referral to the family physician for final diagnosis is the procedure then indicated.

ii. Follow-up Services: Human nature being what it is, it follows that a number of parents, after being notified that a child is defective, fail to obtain treatment. Depending on the nature of the defect, up to six weeks is allowed to elapse before a reminder to the parents is then given. This usually takes the form of a home visit by the nurse to discuss the reason for delinquency in treatment. It is necessary to have some form of resources in the cases of socio-economic difficulties.

iii. Emergencies: The term "first aid" must always be literally interpreted. Nurses have several schools to care for and accidents, etc., will happen when the nurse is not present. The teacher's curriculum includes instruction in first aid. Withholding first aid to await

skilled attention is not justified. Teachers must be encouraged to apply first aid and then send the child

(a) home for arrangement of treatment, or

(b) if especially urgent, to hospital or physician. In either case the parent must be notified and a written record preserved.

iv. **Health Counselling** is always available to pupils on an individual basis and children are encouraged to take their difficulties to the nurse for advice.

v. **Services for the Children of Indigent Parents:** Indigency may be of two types: (a) total indigency, (b) medical indigency only. There should be a close working relationship between the local and provincial welfare authorities, the physicians as a profession and the school health services. It is the responsibility of the local welfare authority to assume normal charges for the treatment of any indigent sick person, and treatment can be very often arranged along these lines.

3. Administration

i. The school health service requires an office in each school. The health office should be:

(a) Well lighted

(b) Twenty feet long for vision testing and electrically fitted for light wall charts

(c) Equipped with a small cubicle for children to disrobe

(d) Equipped with cupboard with lock and key for supplies

(e) Equipped with a sink with hot and cold water

(f) Equipped with a couch for sick children to rest upon.

ii. **Records:** All records and recording should be minimal. The Provincial Department of Health's School Health Record is recommended as a satisfactory form. In Edmonton this is kept within the cumulative record folder and is therefore available to the teacher. The use of the cumulative folder for a Health Record is not satisfactory and has been discontinued in the cities and in the rural areas of Alberta.

ADDITIONAL SERVICES

1. **Dental Services:** The most prevalent and most neglected defect of all children is decay and neglect of the teeth. A dental officer and assistant to survey the teeth and to recommend treatment to the parents has proven in practice to be a great stimulus to parents. In Edmonton the dental service also undertakes repair of the teeth of children of indigent parents.

2. **Psychiatric Unit:** This is a necessity. It should be easily accessible and freely available at all times to children, parents, teaching staff and school health staff.
3. **Consultant Resources:** These should be available to school health personnel. To supervise the school health service in specialized spheres; to supervise special classes for the handicapped; and to advise on the provision of educational and other facilities for the severely defective child.
4. **Tuberculosis Services:** Tuberculosis is still not a rare disease. Close co-operation and special surveys are a necessity to control this disease.

SUPPLEMENTARY MEMORANDUM NUMBER 6

FINANCIAL AID TO HIGH SCHOOL STUDENTS

Who should pay for post-elementary education? Should the state (the public, the tax payer, local or provincial) pay all costs, or should the individual bear some? Behind this question lies the question of who or what benefits when the individual's talents are developed to their optimum, and whether when the individual benefits the individual should pay.

In our society the direct costs of buildings and tuition are now accepted as being the responsibility of the state (both local and provincial) at the secondary level. What might be called "fringe" costs are in dispute: text books, school supplies, materials for courses, special clothes, fees for hobby clubs and other extra curricular activities, cost of school social functions, and the like. What is the extent of such costs, what is their effect, and what proposals might be made to meet these costs?

COSTS OF HIGH SCHOOL EDUCATION

1. Research in the United States

Direct costs, exclusive of loss of income because the student is not working, have been surveyed in a number of places. As reported in a study by Jacobsen, during World War II, the median cost for all schools was approximately \$75, ranging from approximately \$58 in small schools to \$103 in large schools, and increasing from Grade IX to Grade XII (5). The items covering the major portion of the costs were clothing, lunches, and transportation.

Actual costs found will vary with the year and its corresponding cost of living index, with the region, with the grade level, and with the expenses included. Thus one investigator emphasizes school-imposed costs: gym clothes, school library fees, locker fees, student union fees, assembly program fees, entrance to athletic events or school dances, yearbooks, graduation activities, and charitable donations (3). The problem, as seen by this investigator is:

What we are discussing here is the fundamental need to incorporate in school budgets more money for many activities that will enrich the educational opportunities of children now in school. Until this is done, fees, dues, admissions, and "hidden tuition" will continue to be a financial burden on many parents and will cause a sizeable percentage of children to be deprived of opportunities available only to those able to pay for them.

Another investigator concentrated on extra curricular costs: dates, athletic events, school plays and parties, etc. He found that about half the grade XII boys spent over \$100 a year on dates in the south eastern U.S.A. (6). He says:

In a society in which custom places the major economic burden of dating on boys and men, the economic aspects of dating among

high school youth can be particularly frustrating to many boys. . . . Although much is done in this country to provide equality of educational and related opportunity for all youth, significant differences exist among youth in accordance with the economic status of their parents.

He recommends, as do others who have studied this problem, continued efforts by the school to keep such costs down. Another pair of investigators (1) put this well:

Few high schools have met the problem of hidden costs—those expenses which embarrass the penniless student, impoverish his school experiences, and often lead to his untimely withdrawal . . . It is high time for public schools to take stock of the activities carried on in their name that mortify the non-affluent students.

These authors also recommend a study design to determine hidden costs (2). Another investigator finds that most students are in favour of the "hidden costs" items (4). Thus, "a majority of the seniors considered class rings important," "about half the students felt that extra curricular activities helped them scholastically," "more than 70% of the students believed that extra curricular activities helped them socially." Punke (7) links the hidden costs to increased consolidation and to school drop outs, as follows:

Along with consolidation, and the parallel development of more elaborate school programs, there seems to be an increasing tendency to shift the burden of educational costs to parents—through various kinds of fees and hidden costs. Expense items . . . are probably among the reasons why in many areas not more than one-fourth of the youth who enter the secondary school remain to graduate.

2. Research in Alberta

None could be found. Perhaps the Five-School Study have some data.

SCHOLARSHIPS, BURSARIES, AND LOANS FOR HIGH SCHOOL STUDENTS

Very nearly all scholarships, bursaries, and loans are for university or college students, i.e. they are awarded on completion of high school and entrance into university or college. There is a vast literature on scholarships, bursaries, and loans at this level, and almost none on assistance for high school students.

In a definitive document, West (8) points out that in the U.S.A., studies show that if one takes equally capable groups of young people from high income and from low income families, the former have a four to one advantage in getting to college (page 82). Various studies are quoted to show the effect of financial status on entry to college, with the conclusion that "financial barriers are the principal reason for not going on to college in the case of about a third of superior youth who do not go, while the other two-thirds lack sufficient motivation to go" (page 88). West also

notes that "A few programs grant scholarships to students long before their senior year in high school. Coupling this with intensive work with their families might well increase the number of qualified children continuing their education" (page 91). Finally, the *Michigan Holding Power Study* reports fourteen factors "as being influential in determining whether boys and girls stay in school or leave" (West, page 91). The seventh factor is "Tuition and other school costs."

It is known that the state of Western Australia grants a bursary of £80 per year for the last three years of the certificate course in high school, to students who are planning to teach. Undoubtedly some scholarships, bursaries, and loans are granted to high school students in various places.

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SUPPLEMENTARY MEMORANDUM NUMBER 7

TECHNICAL AND VOCATIONAL TRAINING IN HIGH SCHOOLS

Any discussion regarding technical vocational training will require a common interpretation of at least three terms: technical, industrial arts, and vocational. Perhaps we may agree that the following definitions as suggested by the federal Department of Labour will be acceptable:

1. **Industrial Arts:** Instructional shopwork with a non-vocational objective which provides general educational experiences centred around the industrial and technical aspects of life today and offers orientation in the areas of appreciation, production, consumption and recreation through actual experiences with materials and goods. It also serves as exploratory experiences which are helpful in the choice of vocation.
2. **Technical Education:** Education to earn a living in an occupation in which success is dependent largely upon technical information and understanding of laws of science and technology as applied to modern design, production, distribution and service.
3. **Vocational Education:** Education designed to develop skills, abilities, understandings, attitudes, work habits and appreciations, encompassing knowledge and information needed by workers to enter and make progress in employment on a useful and productive basis. It is an integral part of the total education program and contributes toward the development of good citizens by developing their physical, social, civic, cultural, and economic competencies.

In Alberta schools the term "technical" is commonly used in differentiating among the various curriculum areas: academic, fine arts, commercial, technical. Because, by usage, it has become so broad in connotation it is being used less frequently in professional literature. Of major concern is the matter of differentiation between industrial arts education and industrial vocational education.

The following comparison indicates the essential features of each type:

Industrial Vocational	Industrial Arts
1. Purpose: To develop industrially acceptable skill and knowledge or saleable value. Prepares student for direct employment in industry (or apprenticeship).	To develop desirable habits, attitudes and appreciations of industrial methods and materials by means of manipulative experience with industrially acceptable machines, materials, etc. Has an important guidance function.

Industrial Vocational

2. Content:

Specific as required for job. Essentially shop activity, mathematics and science with shop activity periods usually taking 50% of school time. Note: The Federal Department of Labour defines a vocational program as one which schedules at least 50% of school time to shop activity plus mathematics, plus science.

3. Student:

Selected. Screening to ensure apt and suitable students is done as rigidly as is now done for academic program. Major consideration: personality, physique, manipulative dexterity, mechanical aptitude, etc. The vocational goal must be apparent.

4. Age Level:

Program starts whenever industrial vocational goal is determined. Continues for adults as up-grading and improvement programs, as long as need exists.

5. Standard:

Rigid. Externally imposed on school by requirements of industry. Speed is usually a consequential factor. The student must meet the standard required by the trade or industry concerned.

6. Course Length:

School program for individual should stop when student has developed level of skill permitting entry to trade or job concerned. May lead to intermediate stage of part-time employment.

7. School Responsibility:

To maintain contact and be responsible until student is successfully assimilated into industry. Requires school facilities for follow-up, (usually a co-ordinator).

Industrial Arts

General. Is but one area of a general education curriculum which includes mathematics, science, English, social studies, etc. Cuts broadly across industrial areas; this breadth of experience being an essential feature.

All comers. It can be argued that all can benefit from these courses and that those with a minimum of mechanical ability may receive the maximum of benefit.

Is a feature of the enterprise program of elementary grades. In Alberta an organized program starts in Grade VII and continues into the high school.

Flexible. Caters to individual differences. Degree of competence not the major consideration. Success measured in terms of individual growth.

To suit any administrative requirement of school.

To facilitate maximum of personal development in time allotted.

8. School-Industry Relationship:

Close. School program must be sensitive to changing needs of industry. Obviously must orient program to employment situation. This liaison with industry achieved by means of some local advisory group.

A healthy program is aware of the advantages of a pipeline to industry but this is not a primary feature.

9. Size of Class:

Ordinarily limited, with 12 to 15 being considered maximum. Instructors must be in position to give much individual supervision and thereby ensure formation of industrially acceptable motor activities and procedures.

Usually not more than 20 but may, if facilities are adequate, exceed this. Much of instruction may be group in nature. The students "grow" with minimum of individual assistance.

10. School Day:

Same hours as used in industry thereby establishing habits and customs of industry.

As determined by administrative requirements.

11. Instructor

Industrial qualifications and experience essential. Professional education desirable. In Alberta the minimum desirable is journeyman status and one year of professional education.

Professional education essential. Obviously the more industrial competence the better. In Alberta the minimum is four University industrial arts courses plus a Standard S Certificate.

12. Equipment:

Shop should be equipped as close to the accepted in industry as possible. The shop activity program is intensive and relatively specific requiring full scale materials, live units, etc.

Basic industrial type of equipment.

It must be emphasized that this indicates a basic analysis of each type of course or program. It should be noted also that a good industrial arts program strives to incorporate as much as possible of the industrially acceptable in methods, procedures and standards. Similarly, a good vocational program strives to incorporate some of the idealism of the industrial arts. It is also true that an industrial arts course may, for some students, prove to have vocational value. However, a vocational program is fundamentally unsuitable for general educative purposes despite the fact that some liberal arts subject matter may be appended. It would appear, then, that there are two types of shop or technical programs possible in our educational system with each program having distinctive features of intent, design and organization.

It is the contention of industrial vocational persons that in Alberta we have tried to make one program serve the dual functions of vocational education and industrial arts education and have thereby compromised both intents. The existence of this problem was in part responsible for some reorganization in 1953. At that time the Grade X shop courses were reorganized and oriented toward the industrial arts objective with the hope that they would serve the requirements of the school in this respect.

This would free the Grade XI and XII courses for vocational purposes. However, other than some changing of credit values and reorganization of course content, the vocational program remained substantially unchanged in design.

The present situation then, is that in Alberta we have designed our shop program with the following intention:

- Grades VII to X inclusive **Industrial Arts.**
- Grades XI and XII **Industrial Vocational.**

The following table surveys the enrolment in woodworking courses over the past ten years. The data are taken from annual reports and are not limited to Composite High Schools, with the exception that practically all Wood 20 and Wood 30 offered in Alberta is done in the Composite High Schools.

There seem to be two immediately apparent deductions from this table: 1. The Grade X enrolment is flourishing. When in 1953, the course was oriented toward the industrial arts objective, the enrolment underwent an unusual increase. It can surely be concluded that Wood 10 as an industrial arts course serves a need. 2. The enrolment in the senior woodwork course does not appear to be impressive, but the need for more information is obvious.

ENROLMENT IN WOODWORK IN HIGH SCHOOL

	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956
GRADE X BOYS (ALL SCHOOLS)	3706	3941	3787	3489	3766	4090	4131	4383	4652	5126	5605
WOOD 10 (ALL SCHOOLS)	277	255	288	446	513	469	509	917*	1120	1305	1244
GRADE XI BOYS (ALL SCHOOLS)	2842	2992	2958	3007	2850	3082	3152	3294	3636	4078	4390
WOOD 20 (MAINLY COMP. SCHOOLS)	164	144	106	93	147**	169**	139**	171	237	390	419
GRADE XII BOYS (ALL SCHOOLS)	2884	3078	3075	3044	3141	3131	3043	3125	3273	3605	3942
WOOD 30 (COMP. SCHOOLS ONLY)	40	20	30	39	33	44	46	42	31	56	37

* Grade X courses change from 8 credit to 4.5 credit.

** a, b, c (4 credit courses) offered.

1. Factors Determining Enrolment:

The advocates of general education consider this enrolment picture as indicating that the proper role of shop courses is that of industrial arts. However, the proponents of vocational education are just as certain that it is evidence suggesting the need for a truly vocational program. The truth may be closer to the fact that it is a happy timetable arrangement rather than a solution of objectives. The total picture is obscured by a number of factors such as:

1. **The divergent demands of industry.** "Big" industry appears to desire the high school to limit itself to general education with industry itself providing the industrial training. "Small" local industry appears to wish the schools to develop saleable skills as they are unable, because of size, to do so themselves.

2. **The increasing effectiveness of the Alberta Apprenticeship Training Program.** More trade areas are becoming designated and more extensive formal training facilities are being provided. Advocates of vocational education believe that more of this type of program should be in the Composite High Schools and point to the extensive financial outlay as proof of the tax-payers' willingness to support good vocational programs.

3. **The changing role of the Institute of Technology.** If there are trends here it is toward making this a post-secondary institution. Many of the courses at the Institute now give preference to at least Grade XI graduates. Although an accreditation agreement exists which allows graduates of our "technical" program some pre-credit at the Institute, the overall relationship of the function of the vocational high school courses and the function of the institute is not well understood. No doubt some clearly defined relationship would help to clarify the role of the high school.

4. **Fluctuating economic conditions.** In these prosperous times it appears that the industrial world is not overly concerned with our efforts. The advocates of a vocational program see this as effect not cause, and suggest that we should have a philosophy which could cope with all situations.

5. **Changing type of economy in Alberta.** As we become more industrialized (in 1954 the value of manufactured goods exceeded the value of agricultural production) the need for industrial vocational education will no doubt increase and it would appear expedient to clarify our position.

6. **The teacher shortage.** Our modest attempts to foster industrial vocational education are being made increasingly more difficult by our inability to attract qualified instructors from industry. This situation will probably only be improved with the assistance of industry.

7. **The three-year high school program.** When the four-year program was the vogue many students in the academic and general program patterns took Grade XI and XII shop courses for industrial arts purposes. The current three-year program has led to a restriction of this practice with the result that these senior courses might now be reorganized into a wholly vocational program.

8. **The prestige of the academic program.** Advocates of an industrial vocational program are of the opinion that students who would best be served by a vocational program will continue to struggle with the academic program until something better suited to their purposes is provided. The argument, of course, is that the weakness of our present vocational program results in the loss of such students to the other programs.

The foregoing would indicate that research is needed, as follows:

- (a) A study of the vocational effectiveness of our present program
- (b) Further clarification and delineation of the "Vocational Preparation" objective of the high school, so that we may evaluate our present position
- (c) Some experimental study of a well-designed vocational program which will indicate the role of the Composite School Shop Program in the light of student needs.

A better high school program would result from courses of studies in specific groups of subject matter instead of by the present hodge-podge method of offering constants and a free choice of numerous options.

During the last two decades practical and vocational education has been accepted by educators as a necessary part of a well rounded secondary school program. It has become respectable. With this acceptance, vocational courses have been fitted into the traditional high school pattern with the result that there is a trend towards making them just another part of general education, without specific leadership, without specific objectives, and without accomplishment acceptable as preparation for the areas they are intended to serve. If courses of studies were designed for Academic, Technical, Commercial, Industrial and Home Making both students and the public would be able to understand better the aims and objectives of these courses.

The vocational program at high school level is tending to lose its vitality, and the technical high school program tends to deteriorate and become lifeless. There is need for national standards of matriculation, commercial, technical, industrial and home making programs. The present requirements for university entrance are recognized and could with some standardization be acceptable as a criterion for general matriculation. Students, educators and the public have accepted this measure of scholastic attainment as a definite standard of achievement.

Commercial, technical, industrial and home making courses should be placed on a similar basis by definite aims, prescribed curricula, and continuity of subject matter as well as by a comprehensive examination before a diploma is issued.

SUPPLEMENTARY MEMORANDUM NUMBER 8

VOCATIONAL AGRICULTURE AT THE SECONDARY SCHOOL LEVEL

1. History of Alberta Experiences in Vocational Agriculture

In the year 1913 the report of the Commission of Industrial and Technical Education recommended the establishment of secondary school vocational agriculture courses in Canadian farming communities. The federal government in 1913 and later in 1940 enacted legislation in conformity with such recommendations. Federal funds have been payable to provincial authorities on a "dollar for dollar" basis; only the provincial dollar, rather than the municipal or school authority dollar, is considered.

In the same year, 1913, the Alberta Department of Agriculture set up six provincial agricultural and home economics schools at points which at that date showed promise of becoming populous farming areas. Four of these schools had but brief histories, while a fifth school through the forty-five years of its existence has experienced a series of openings and closings. Within the last period of agricultural prosperity a new school plant was established in the Peace River Valley; at the moment, three schools are in operation. However, difficulties in persuading sufficient students to attend these three schools have persistently dogged their administrators, despite arrangements to extend their program still further into the area traditionally considered to be within the Department of Education's function.

Such inducements as free railway or bus fares to and from these centers have prevailed for years and have improved somewhat the rather disappointing enrolments; still the operation of these schools has been at a cost of eight hundred to one thousand dollars per student, an amount far in excess of the per pupil costs in our high schools. This relatively high cost of operation has been partially met by use of Federal Vocational Funds. Attendance, to quite a degree, is associated with general prosperity of the farming community of the province; this phenomenon is common to Saskatchewan and Manitoba.

The Alberta Schools of Agriculture and Home Economics have made a very valuable contribution to the improvement of farming and farm-life in the province. Their graduates, however thinly they may be scattered across the province's farming areas, have made themselves well known amongst their neighbors for their progressive viewpoints and accomplishments. Perhaps as important, is the stream of Agricultural School graduates entering the University's Faculty of Agriculture and School of Household Economics. With lowered admission requirements favoring such students when they presented themselves at the university, it had once been possible for many Alberta boys and girls to attend university. The contributions of the Provincial Schools of Agriculture, particularly in the long period preceding the organization of school divisions with the resultant increase of high school services for most farm homes, must not be overlooked or underestimated. The dormitory services prevailing in these

schools were, and are, unexcelled. Invaluable social education features attendance at one of these schools and enriches the life of many communities as graduates return to their homes.

2. Comparisons With Vocational Agriculture in Other Places

The Alberta story in Vocational Agriculture has been typical of the story across Canada. Until recently, one-roomed or small-district schools characterized rural education. The provinces which have abandoned the myriad of small rural districts in favor of larger administrative units have also instituted vocational agricultural education in many of the secondary schools in New Brunswick, Ontario, Saskatchewan, and British Columbia. After a brief experiment in extending vocational agriculture in Alberta high schools, the program has shown a tendency to decline.

Agricultural courses of the vocational type have undergone a positive evolution in the United States over the last forty years; there is now a highly standardized structure of administration and grants in the greater number of states, with federal and state officials administering funds at the school district level. The movement not only enrolls secondary students, but the same agencies organize vocational agriculture instruction for adults actually engaged in farming. This level of instruction was once inaugurated in Alberta in the Cardston area. Such secondary school courses have various related goals. They are designed for boys who expect to farm, and are also for those boys who cannot reasonably expect to become established in farming, but who will doubtless follow occupations related to farming activities. These courses recognize that the actual farming force is tending to decrease as mechanization increases, and that there will be need for better educated and trained operators to manage and conduct the larger farming units.

British Columbia has a coordinator of vocational agricultural high school activities, and several centers have been established. The movement was officially inaugurated in 1951 with a summer course for agricultural graduates with high school experience who wished to take over these new high school courses in practical agriculture. This summer course was held at the provincial university and instruction was offered by United States supervisors and agricultural teachers. Centers at Creston, Chilliwack, Kelowna, and Salmon Arm have buildings designed expressly to meet the needs of vocational agricultural instruction. Following the United States pattern of Future Farmers of America, an attempt to fuse all of the vocational agriculture high school students into one province-wide organization was successfully carried out, with the aid of ritual, blazers with local badges, and other devices. This movement has the active interest and supervision of the provincial Department of Education.

The vocational agriculture program in such places as British Columbia, Saskatchewan, and many parts of the U.S.A. has four phases:

1. Systematic classroom instruction related closely to local needs.

2. Supervised farming practices in which each boy must have one or more enterprises of a practical nature where profit is the main consideration.
3. Farm shopwork.
4. Farm boys' club work.

These activities require that the boys' schoolwork and project work be well integrated. At the present, there is no clear picture of the need for agricultural education in Alberta high schools.

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ALBERTA TEACHERS ASSOCIATION
BRIEF PRESENTED TO ALBERTA
ROYAL COMMISSION ON EDUCATION
M1 39604109 LAW



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